S3860-1.3

AN OCCUPATIONAL PROFILE

OF

FEDERAL GOVERNMENT EMPLOYMENT

IN

MASSACHUSETTS

1977

REPORT NUMBER 10

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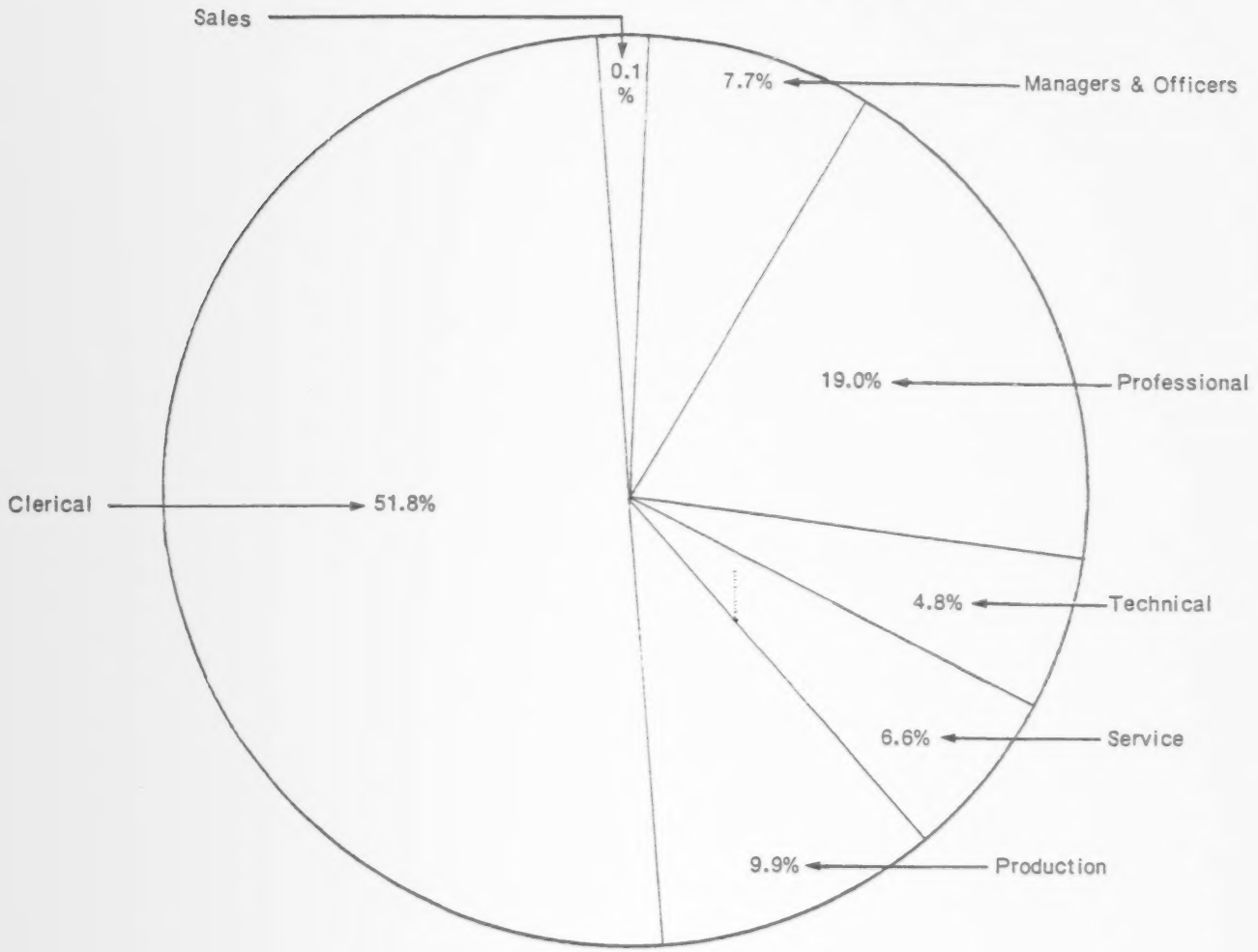
INTRODUCTION

In lieu of each State carrying out an independent survey of occupational employment in the Federal Government, the Bureau of Labor Statistics purchased from the Office of Personnel Management data relating to employment of workers of approximately 2,400 occupations in the Federal sector. These data were obtained from the Central Personnel Data System and converted to the Occupational Employment Statistics classifications.

The data includes full-time temporary, full-time permanent, part-time temporary, and part-time permanent employees on the Federal Payroll as of October 1977. While some employment in the Federal Judicial Branch is not included it would appear that nearly all the universe is accounted for in Massachusetts.

FEDERAL GOVERNMENT

DISTRIBUTION OF EMPLOYMENT BY MAJOR OCCUPATIONAL GROUPS



OCCUPATIONAL GROUP	EMPLOYMENT	PERCENTAGE
Managers, Officers, Inspectors	4,475	7.7
Professional Occupations	11,061	19.0
Technical Occupations	2,801	4.8
Service Occupations	3,863	6.6
Production & Maintenance Occupations	5,739	9.9
Clerical Occupations	30,162	51.8
Sales Occupations	96	0.1
All	58,197	100.0

EMPLOYMENT DISTRIBUTION AND NET CHANGE
BY MAJOR OCCUPATIONAL CATEGORY

Occupational Category	Employment 1974	1977	Change
Total Employment	57,219	58,197	+ 978
Managers, Officers, and Public Administration Inspectors	4,061	4,475	+ 414
Professional Occupations	9,605	11,061	+ 1,456
Technical Workers	2,424	2,801	+ 377
Service Workers	3,997	3,863	- 134
Production & Maintenance	6,408	5,739	- 674
Clerical Workers	30,627	30,162	- 465
Sales Workers	97	96	- 1

The comparison shown in the table above, as well as comparisons with other interim reports, clearly shows that the growth occupations are primarily in the Professional category.

The following occupations account for most of this growth over the three year period.

Civil Engineers	+ 45
Electrical and Electronic Engineers	+ 27
Chemists	+ 24
Biological Scientists	+ 55
Economists	+ 20
Psychologists	+ 38

Purchasing Agents	+ 56
Accountants and Auditors	+ 222
Case Workers	+ 32
Lawyers	+ 28
Registered Nurses	+ 182
Personnel and Labor Relations Specialists	+ 66
Physicians and Surgeons	+ 374

Although there were some professional occupations showing a downward trend, the only significant one was Physicists with a drop of 37 (over 10 percent). The New England Regional Office of the Bureau of Labor Statistics recently published "Employment Outlook for 1980 College Graduates in New England". The part of this report dealing with employment prospects in the Federal sector indicates that the growth opportunities are still in the professions. We quote from that report:

"June graduates in most fields seeking to enter the federal service are once again faced, not only with intense competition from those candidates scoring in the high 90's in the Professional and Administrative Career Examination (PACE) as in the past, but also by the recently enacted freeze in hiring in the federal service. Current starting salaries are either $11,243 or $13,925 depending on the Federal grade level. Engineering and computer science graduates are the exception with good opportunities existing throughout New England for those trained in these fields. Specific needs are for electrical/electronic, mechanical, nuclear and facilities engineers. Starting pay rates for engineers are at an all time high with starting salaries of $18,100 for bachelor degree holders and $21,011 for those with a graduate degree. For mining and petroleum

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engineering graduates who are interested in working outside the New England area the starting salary is $22,147.

For those engineers interested in working in New England opportunities exist at the Portsmouth Naval Shipyard, Hanscom Air Force Base, the Naval Underwater System Center and the Transportation System Center. For the non-engineering graduate best hiring prospects are generally in the mid-West but more specifically in the Detriot and Chicago metropolitan areas".

For your convenience the General Pay Scale effective October 9, 1979 is shown below:

Grade	Rates									
	1	2	3	4	5	6	7	8	9	10
GS-1	$7,210	$7,450	$7,690	$7,930	$8,170	$8,410	$8,650	$8,890	$9,902	$9,126
GS-2	8,128	8,399	8,670	8,902	9,002	9,267	9,532	9,797	10,062	10,327
GS-3	8,952	9,250	9,548	9,846	10,144	10,442	10,740	11,038	11,336	11,634
GS-4	10,049	10,384	10,719	11,054	11,389	11,724	12,059	12,394	12,729	13,064
GS-5	11,243	11,618	11,993	12,368	12,743	13,118	13,493	13,868	14,243	14,618
GS-6	12,531	12,949	13,367	13,785	14,203	14,621	15,039	15,457	15,875	16,293
GS-7	13,925	14,389	14,853	15,317	15,781	16,245	16,709	17,173	17,637	18,101
GS-8	15,423	15,937	16,451	16,965	17,479	17,993	18,507	19,021	19,535	20,049
GS-9	17,035	17,603	18,171	18,739	19,307	19,875	20,443	21,011	21,579	22,147
GS-10	18,760	19,385	20,010	20,635	21,260	21,885	22,510	23,135	23,760	24,385
GS-11	20,611	21,298	21,985	22,672	23,359	24,046	24,733	25,420	26,107	26,794
GS-12	24,703	25,526	26,349	27,172	27,995	28,818	29,641	30,464	31,287	32,110
GS-13	29,375	30,354	31,333	32,312	33,291	34,270	35,249	36,228	37,207	38,186
GS-14	34,713	35,870	37,027	38,184	39,341	40,498	41,655	42,812	43,969	45,126
GS-15	40,832	42,193	43,554	44,915	46,276	47,637	48,998	*50,359	*51,720	*53,081
GS-16	47,889	49,485	*51,081	*52,677	*54,273	*55,869	*57,465	*59,061	*60,657	
GS-17	*56,099	*57,969	*59,839	*61,709	*63,579					
GS-18	*65,750									

* The rate of basic pay for employees at these rates is limited to $50,112.50, in accordance with section 5308 of title 5 of the United States Code, and section 101(c) of Public Law 96-86.

FEDERAL GOVERNMENT
RANKED OCCUPATIONAL EMPLOYMENT
1977

	Occupation	Employment
1.	Postal Mail Carrier/Postal Distributor	16,507
2.	General Clerk	3,188
3.	All Other Managers	3,107
4.	Postal Service Clerk	2,701
5.	All Other Unskilled Laborers	1,622
6.	Accountants/Auditors	1,589
7.	Nurse Aides/Orderly	1,451
8.	Typist	1,241
9.	Secretary	1,091
10.	Registered Nurse	1,034
	Total	33,534

These ten occupations which account for 57.2 percent of total Federal employment in Massachusetts accounted for 59.2 percent in 1974. Since 1974 the total in these occupations has declined by 374. The most significant changes were in Postal Mail Carriers which had a drop of 1,050, and All Other Managers and Officers with an increase of 398.

Occupational Staffing Patterns in Federal Government
as of October 1977

Occupational Title	Estimated Employment	Percent of Total 1/ Employment
TOTAL ALL OCCUPATIONS	58,197	100.00
Managers, Officer, and Public Administration Inspectors	4,475	7.69
Public Administration Inspectors, except Construction	898	1.54
Construction Inspectors	80	0.14
Postmaster and/or Mail Superintendent	390	0.67
All Other Managers	3,107	5.3
Professional Occupations	11,061	19.00
Aeronautical and Astronautical Engineer	49	0.08
Agricultural Engineer	1	--
Chemical Engineer	15	0.03
Civil Engineer	430	0.74
Electrical & Electronic Engineers	447	0.77
Industrial Engineer	45	0.08
Mechanical Engineer	184	0.32
Metallurgist and Metallurgical Engineer	24	0.04
Safety Engineer	11	0.02
Ceramic Engineer	11	0.02
Nuclear Engineer	2	--
All Other Engineers	274	0.47
Financial Analyst	29	0.05
Mathematicians.	52	0.09
Statisticians	35	0.06
All Other Mathematical Scientists	85	0.14
Chemist	289	0.50
Geologists and Geophysicists	101	0.17
Meteorologist	39	0.06
Oceanographer	10	0.01
Physicists	287	0.50
All Other Physical Scientists	187	0.32
Agricultural Scientist	11	0.02
Biological Scientists	217	0.19
Forester and Conservation Scientist	32	0.05
Economist	139	0.23
Psychologist	165	0.28
Sociologist	8	0.01
Urban and Regional Planner	15	0.02
All Other Social Scientists	84	0.14
Systems Analyst E. D. P.	190	0.32
Teacher Adult Education	92	0.15
Photographer	30	0.05
Purchasing Agent/Buyer	522	0.89
Accountants/Auditors	1,589	2.73

Federal Government (cont.)

Occupational Title	Estimated Employment	Percent of Total 1/ Employment
Landscape Architect	5	--
Architect	42	0.07
Archivist	17	0.02
Case Worker	214	0.36
Clergy	36	0.06
Commercial Artist	35	0.06
Dentist	59	0.10
Dietition/Nutritionist	40	0.06
Writer/Editor	58	0.09
Law Clerk	62	0.10
Lawyer	311	0.53
Librarian	51	0.08
Model Maker	30	0.05
Curator, Museum	12	0.02
Registered Nurse	1,034	1.77
Occupational Therapist	48	0.08
Optometrist	5	--
Paralegal Personnel	19	0.03
Personnel/Labor Relations Specialists	488	0.83
Pharmacist	45	0.07
Physical Therapist	36	0.06
Physician/Surgeon	1,011	1.73
Podiatrist	6	0.01
Public Relations Practitioners	56	0.09
Veterinarian	14	0.02
Designer	30	0.05
Judge	42	0.07
Tax Examiner/Collector/Agent	767	1.31
All Other Therapists	7	0.01
Appraiser Real Estate	38	0.06
Home Economist	10	0.01
Group Recreation Worker	17	0.02
Speech and Hearing Clinicians	14	0.02
Corrective Therapist	23	0.03
All Other Professionals	678	1.16
Technical Workers	2,801	4.81
Computer Programmer	43	0.07
Drafters	40	0.06
Electrical/Electronic Technicians	297	0.51
Surveyor	34	0.05
Radiographer	2	--
Broadcast Technician	40	0.06
All Other Engineering Technicians	398	0.68
Physical Science Technician	213	0.36
Biological Science Technician	327	0.56
All Other Science Technicians	59	0.10
Air Traffic Controller	302	0.51
Dental Assistant	58	0.09
Mathematical Technician	4	--
Physicians Assistant	7	0.01
Museum Technician/Restorer	4	--
Airplane Pilot	39	0.06

Federal Government (cont.)

Occupational Title	Estimated Employment	Percent of Total 1/ Employment
Technical Assistant Library	29	0.04
Therapist (Manual Arts, Music, Recreation	13	0.02
Pharmacy Helper	26	0.04
Medical Record Librarian	32	0.05
Dental Hygienist	9	0.01
Medical Laboratory Technologist	221	0.37
Nuclear Medical Technologist	8	0.01
Radiologic Technologist	75	0.12
Prosthetist Orthotist	13	0.02
Electrocardiograph Technician	69	0.11
All Other Medical/Dental Technicians and Technologists	116	0.19
All Other Technical Occupations	323	0.55
Service Workers	3,863	6.63
Maid	1	--
All Other Janitors/Porters/Cleaners	682	1.17
Guards/Watchman/Doorkeepers	100	0.17
Baker Bread/Pastry	10	0.01
Butcher/Meat Cutter	45	0.07
Cook Institutional	72	0.12
All Other Food Service Workers	538	0.92
Barber	9	0.01
Cosmetologist/Hair Stylist	2	--
Housekeeper	10	0.01
Nurse Aide/Orderly	1,451	2.49
Recreation Facilities Attendant	1	--
Fish and Game Warden	19	0.03
Elevator Operator	27	0.04
Social Service Aide	7	0.01
Occupational Therapy Aide	49	0.08
Officer Police	192	0.32
Detective Police	416	0.71
United States Marshall	26	0.04
Fire Fighter	205	0.35
All Other Service Workers	1	--
Production and Maintenance Workers	5,739	9.86
Mechanic Aircraft	313	0.53
Mechanic Automotive	193	0.33
Body Repairer Automotive	21	0.03
Electromedical Equipment Repairer	16	0.02
Gunsmith	6	0.01
Engineering Equipment Mechanic	77	0.13
Hydroelectric Machinery Mechanic	4	--
Instrument Man Optical	4	--
Laundry Machine Mechanic	3	--
Locksmith	6	0.01
Marine Mechanic	13	0.02
Mechanic Maintenance	519	0.89
Office Machine Servicer	8	0.01
Refrigeration Mechanic	77	0.13
Electronics Mechanic	232	0.39

Federal Government (cont.)

Occupational Title	Estimated Employment	Percent of Total 1/ Employment
Data Processing Mechanic	4	--
Gas and Electric Appliance Repairer	1	--
All Other Mechanics and Repairers	110	0.18
Developer/Projection Printer	1	--
Marker, Classifier, Assembler (Laundry/Dry Cleaner)	70	0.12
Washer, Machine/Starcher	19	0.03
Machine Presser Laundry	4	--
Truck Driver	378	0.64
Asbetos and Insulation Worker	2	--
Blacksmith	5	--
Boilermaker	7	0.01
Blueprinting Machine Operator	2	--
Cabinetmaker	18	0.03
Cable Splicer	19	0.03
Carpenter	129	0.22
Crane/Derrick/Hoist Operator	18	0.03
Crater	10	0.01
Electrician	173	0.29
Exterminator	7	0.01
Supervisor Nonworking, except Service	96	0.16
Heavy Equipment Operator	49	0.08
Hook and Chain Operator	13	0.02
Industrial Truck Operator	94	0.16
Inspector	23	0.03
Installer Repairer Telephone	14	0.02
Instrument Repairer	1	--
Line-Installer Repairer	2	--
Locomotive Engineer	1	--
Machinist	60	0.10
Maintenance Repairer General Utility	132	0.22
Millwright	4	--
Oiler	4	--
Painter	99	0.17
Plasterer	1	--
Plater	1	--
Plumber/Pipefitter	148	0.25
Motion Picture Projectionist	2	--
Roofer	2	--
Rotary Drill Operator	6	0.01
Dental Laboratory Technician	17	0.02
Sandblaster/Shotblaster	1	--
Sewage-Plant Operator	13	0.02
Sewing Machine Operator, Regular Equipment	15	0.02
Sheet Metal Worker	52	0.08
Stationary Boiler Firer	246	0.42
Stationary Engineer	20	0.03
Stonemason	25	0.04
Alteration Tailor	1	--
Animal Caretaker	12	0.02
Water Treatment Plant Operator	3	--
Welders and Flamecutters	25	0.04
Offset Lithographic Press Operator	49	0.08
Platemaker	1	--

Federal Government (cont.)

Occupational Title	Estimated Employment	Percent of Total 1/ Employment
Stripper (Printing)	3	--
Camera Operator	6	0.01
Strike on Machine Operator	4	--
Auto Service Station Attendant	47	0.08
Stock Clerk, Sales Floor	77	0.13
Highway Maintainer	3	--
Furniture Finisher	1	--
Instrument Maker	14	0.02
Lathe/Turning Machine Operator	1	--
Machine Tool Operator Combination	11	0.01
Machine Tool Operator Tool Room	1	--
Molder Bench/Floor	3	--
Pattern Maker Metal	1	--
Pattern Maker Wood	1	--
Sample Maker	1	--
Saw Filer	2	--
Ship Fitter	14	0.02
Shipwright	5	--
Woodworking Machine Operator	0	--
Painter Production	3	--
Loading Machine Operator	1	--
Dip Plater	2	--
Screenmaker Photographic	1	--
Artificial Appliance Maker	2	--
Planner Operator	0	--
Bindery Worker	11	0.01
Gardeners and Groundskeepers	10	0.01
Ordinary Seaman	17	0.02
Ship Engineer	7	0.01
All Other Skilled Craftworkers	7	0.01
All Other Operatives and Semiskilled Workers	160	0.27
All Other Laborers	1,622	2.78
Clerical Workers	30,162	51.82
Bookkeeping and Billing Machine Operator	2	--
Computer Operator	151	0.25
Keypunch Operator	579	0.99
Tabulating Machine Operator	20	0.03
Calculating Machine Operator	4	--
All Other Office Machine Operators	31	0.05
Stenographer	817	1.40
Accounting Clerk	702	1.20
Bookkeeper Hand	124	0.21
Cashier	109	0.18
Claim Adjuster	112	0.19
Claims Clerk	358	0.61
Correspondence Clerk	4	--
General Clerk	3,188	5.47
Information Clerk	280	0.48
Mail Clerk	410	0.70
Payroll/Timekeeping Clerk	149	0.25
Personnel Clerk	327	0.56
Procurement Clerk	181	0.31

Federal Government (cont.)

Occupational Title	Estimated Employment	Percent of Total 1/ Employment
Real Estate Clerk	82	0.14
Receptionist	23	0.03
Secretary	1,094	1.87
Statistical Clerk	38	0.06
Switchboard Operator	118	0.20
Messenger	10	0.01
Travel Clerk	26	0.04
Typist	1,241	2.13
Clerical Supervisor	53	0.09
Postal Service Clerk	2,701	4.64
All Other Office Clerical Workers	120	0.20
Production Clerk	77	0.13
Shipping Packer	12	0.02
Shipping and Receiving Clerk	25	0.04
Stock Clerk (Storeroom and Warehouse)	72	0.12
Dispatcher	18	0.03
Postal Mail Carrier/Postal Distribution Workers	16,507	28.36
All Other Plant Clerical Workers	397	0.68
Sales Workers	96	0.16
Sales Clerks	96	0.16

1/ Detail may not add to totals due to rounding.

S 3860-1.4

AN OCCUPATIONAL PROFILE

OF

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PREFACE

We wish to extend our appreciation to the many government agencies, authorities, counties and other municipalities who cooperated by supplying the occupational data from which the estimates in this publication were derived.

Our thanks is also extended to the National Office of the Bureau of Labor Statistics for survey design, definitions and estimating procedures, and to the Boston Regional Office for their technical assistance in this Federal-State cooperative effort.

INTRODUCTION

State Government

The occupational profile of employment in state government was collected from numerous sources. Among the contributors were, The Civil Service Commission, Bureau of Personnel, Comptrollers Office, and the Supreme Judicial Court. Other agencies were contacted to confirm the employment from these centralized sources.

Over two thousand different occupational titles were reported and were condensed to one hundred and twenty-five Occupational Employment Survey codes. Because of the obvious problems in converting from one set of titles to another, and the numerous sources used a certain amount of error could exist.

Since this information was last published in 1975 many changes in titles have taken place, and the structure of the survey instrument was refined. Because of these changes no comparison should be made with the previous publication.

A profile of the occupational structure of state government in Massachusetts has been constructed for May of 1979. The data gathered was compiled by occupational title, and then summed to obtain an estimate of total employment. The job level within this industrial sector was found to have just exceeded 53,200 by the reference date.

The Massachusetts government workforce was concentrated predominantly in clerical, professional and technical occupations. Positions in these fields of work tallied 32,600, or roughly 60 percent of all state government jobs.

Clerical workers, both in state government and in the Massachusetts economy in its entirety, outnumber all other occupational categories. Nearly one out of every three state workers was engaged in some type of clerical activity. Typists, general clerks, and stenographers together represented almost 70 percent of the job count in this occupational category.

Approximately 28 percent of the positions within state government were classified as part of the professional and technical occupational category. Caseworkers, such as probation and parole officers,clinical and psychiatric social workers, and welfare workers, composed the numerically most significant occupational title within this grouping. Though representing a smaller percentage of state employment, civil engineers, accountants and auditors were also found to be considerable in number.

The job count of service workers employed by the State during this period hovered around 9100. Close to forty-five percent of these occupations were filled by individuals trained as social service aides, correction and police patrol officers.

Occupations in the maintenance and production occupational category accounted for roughly 6600 positions throughout State government. In particular, heavy equipment operators, laborers, and unskilled workers were found to be most numerous.

The occupational category which commanded the smallest share of employment, (approximately 9 percent), was managers, officers, elected officials and public administration inspectors. Nearly 60 percent of the jobs in this category were classified as "all other managers."

Occupational Staffing Patterns in State Government 1/
as of May 1979

Occupational Title	Estimated 2/ Employment	Percent of Total 3/ Employment
TOTAL ALL OCCUPATIONS	53,205	100.00
Managers, Officers, Elected Officials and Public Administration Inspectors	4,850	9.12
Chief Executives, General Administrators and Legislators	220	0.41
Construction Inspectors	30	0.06
Public Administration Inspectors	1,700	3.20
All Other Managers	2,900	5.46
Professional and Technical Occupations	14,960	28.12
Judge	90	0.17
Lawyer	540	1.01
Law Clerk	60	0.11
Paralegal Personnel	200	0.38
Welfare Investigator	10	0.03
Caseworker	2,090	3.92
Community Organization Worker	40	0.07
Group Recreation Worker	140	0.26
Physician/Surgeon	10	0.02
Nurse, Professional	760	1.42
Licensed Practical Nurse	60	0.10
Medical and Dental Technicians/Technologists	90	0.17
Physical Therapists	100	0.19
All Other Therapists	30	0.06
Accountants and Auditors	1,230	2.32
Budget Analyst	50	0.10
Tax Examiner, Collector/Revenue Agent	480	0.89
Appraiser, Real Estate	40	0.07
Librarian, Professional	70	0.13
Technical Assistant, Library	50	0.09
Personnel/Labor Relations Specialists	180	0.33
Employment Interviewer	880	1.66
Vocational/Educational Counselor	610	1.15
Claims Taker, Unemployment Benefits	420	0.80
Purchasing Agent/Buyer	30	0.05
Public Relations Practitioner	100	0.18
Writer/Editor	10	0.02
Photographer	70	0.12
Commercial Artist	10	0.02
Systems Analyst, EDP	110	0.20
Computer Programmer	190	0.35
Economist	50	0.09
Psychologist	210	0.39
Urban and Regional Planner	210	0.39

State Government (cont.)

Occupational Title	Estimated 2/ Employment	Percent of Total 3/ Employment
Civil Engineer	1,460	2.75
Electrical/Electronic Engineers	20	0.04
Mechanical Engineer	10	0.01
All Other Engineers	230	0.43
Electrical/Electronic Technicians	70	0.12
Surveyor	40	0.08
Traffic Technician	70	0.12
All Other Engineering Technicians	460	0.87
Forester and Conservation Scientist	50	0.10
Biological Scientist	160	0.29
All Other Life Scientists	80	0.16
Chemist	150	0.27
Science Technicians	110	0.21
Mathematical Scientists	10	0.03
All Other Professional Workers	2,850	5.35
Clerical Occupations	17,640	33.15
Clerical Supervisor, Office or Plant	180	0.34
Court Clerk	130	0.24
Library Assistant	10	0.02
License Clerk	340	0.64
Messenger	170	0.33
Mail Clerk	140	0.26
Cashier	160	0.30
Switchboard Operator	620	1.17
Receptionist	10	0.03
Secretary	280	0.53
Stenographer	1,600	3.00
Typist	7,100	13.34
File Clerk	10	0.02
Personnel Clerk	10	0.02
Bookkeeper, Hand	410	0.77
Accounting Clerk	160	0.31
Statistical Clerk	380	0.72
Computer Operator	50	0.10
Keypunch Operator	610	1.14
Duplicating Machine Operator	80	0.16
All Other Office Machine Operators	90	0.17
General Clerk, Office	3,590	6.74
All Other Office Clerical Workers	1,340	2.51
Dispatcher, Police, Fire and Ambulance	60	0.10
Stock Clerk, Stockroom, Warehouse/Storage Yard	70	0.13
Production Clerk/Coordinator	20	0.04
Shipping/Receiving Clerk	10	0.01
Weigher, Recordkeeping	20	0.04
Operating, Maintenance, Construction, Repair, Material Handling, and Powerplant Occupations	6,640	12.48
Supervisor, Nonworking	10	0.01
Carpenter	350	0.65
Electrician	410	0.77
Machinist	50	0.10
Painter, Maintenance	90	0.17

State Government (cont.)

Occupational Title	Estimated 2/ Employment	Percent of Total 3/ Employment
Welder/Flamecutter	10	0.02
Plumber/Pipefitter	160	0.29
Mechanic, Automotive	160	0.29
Mechanic, Maintenance	10	0.02
Engineering-Equipment Mechanic	50	0.09
Street-Light Repairer and Servicer	80	0.15
Radio Mechanic	20	0.04
All Other Mechanics and Repairers	300	0.55
Maintenance Repairer, General Utility	310	0.59
Heavy Equipment Operator	1,320	2.47
Bus Driver	30	0.05
Delivery/Route Worker	120	0.22
Truck Driver	220	0.42
Highway-Maintenance Worker	280	0.52
Stationary Engineer	300	0.56
Stationary Boiler-Firer	220	0.42
Press Operator/Plant Printer	10	0.02
All Other Skilled Craft and Kindred Workers	500	0.93
All Other Operative and Semiskilled Workers	500	0.94
All Other Laborers and Unskilled Workers	1,160	2.18
Service Occupations	9,110	17.12
Supervisor, Service	20	0.04
Janitors, Porters, and Cleaners	290	0.55
Police and Detective Supervisor	240	0.46
Detective, Police	120	0.22
Police Patrol Officer	1,210	2.28
Correction Officer/Jailer	1,560	2.92
Forest Conservation Worker	180	0.33
Fish and Game Wardens	10	0.02
Recreation Facility Attendant	720	1.35
Child-Care Worker	370	0.70
Social Service Aide	2,510	4.72
Gardeners and Groundskeepers	430	0.80
Guards and Doorkeepers	120	0.23
Cook, Institution	670	1.25
All Other Food Service Workers	160	0.30
All Other Service Workers	510	0.96

1/ Coverage does not include hospitals and educational activities such as elementary and secondary schools, vocational high schools, universities, colleges, junior colleges, and technical institutes.

2/ Summed parts may not equal totals because of rounding.

3/ Percentages calculated from unrounded numbers.

INTRODUCTION

Local Government

The Sample

The second quarter 1979 report (ES-202) of employment and wages covered by the Massachusetts Employment Security Law was used as a sampling frame for the Occupational Employment Statistics survey of Local Government.

The sampling frame was stratified into nine employment size classes. All establishments were subject to sample selection on a random basis, with the units in the larger size classes having a proportionately higher chance of selection. Each unit was given a weight according to the proportion of firms selected in each size class. The sample included 119 establishments with employment of 71,589.

The Estimating Procedure

All useable questionnaires were stratified into seven size groups, by industry. Reported total employment and occupational employment on each questionnaire was multiplied by the weight assigned during sample selection. These industry data were then divided into the employment in the ES 202 report (stratified by corresponding cells) for the reference month of the survey. The result produced by this procedure is known as the benchmark factor. This factor was then applied to the occupation data, thus accounting for nonresponse. These occupational estimates were then summed across size classes in industry totals.

Sampling Error

Sampling error is an arithmetic measure of the precision of an estimate. It is the difference between the estimate computed from the sample and the result that would have been obtained if the same methods were used to collect identical information from the universe. The relative errors shown are such that the chances are 2 out of 3 that the results of a comparable full scale data collection, using the same survey approach, would not differ by more than the percent shown; the chances are 19 out of 20 that the results of a full scale data collection would not differ by more than twice the percent shown. For example, it is estimated in this report that there are 460 Accountants/ Auditors employed in Local Government making up 0.43 percent of total employment. Thus the chances are about 68 out of 100 that the results of a comparable full scale data collection would differ by less than 72 (15 percent) from the 460 estimated; similarly the estimated .43 percent of total employment would differ by less than 0.06 percent of total employment.

Nonsampling Error

The results of this survey are subject to biases and other nonsampling errors. Although careful editing and screening steps were taken, responding establishments may account for some errors in computations and processing, as well as placing workers in a wrong occupation. The nonrespondents are a source of nonsampling error for which measures are not available but are reflected in the estimating procedure.

Survey Comparisons

Since this information was last published in 1975 many changes in titles have taken place, and the structure of the survey instrument was refined. Because of these changes no comparison should be made with the previous publication.

O E S LOCAL GOVERNMENT

Nearly two out of every three jobs in Local Government are concentrated in the service, maintenance and production occupations. This is contrary to private industry as well as to Federal and State government where clerical workers predominate.

Service occupations command the greatest share of employment, with police patrol officers and fire fighters having the largest employment in this category as well as within this industrial sector.

Positions in maintenance and production totaled over 30,000, representing the second largest occupational category. Unfortunately, however, almost half of this employment had to be aggregated and classified under residual occupational categories. Highway maintenance workers and automotive mechanics had the largest employment in this major occupational group, 1830 and 1670 positions respectively.

Employment in the clerical category just exceeded 16,500, or 15 percent of the active local government workforce. Typists, general office clerks, and "all other office clerical staff" accounted for more than half of the positions in this field.

Professional and technical occupations together were responsible for nearly 13,000 jobs or 12 percent of the employment in this industrial sector. Case workers, civil engineers, librarians, and group recreation workers are a sampling of the more prominent titles included in the professional category. Among technical occupations, the only one of significant numerical importance was that of library assistant (920 positions).

The occupational category, managers, officers, and public administration officials approached a job level of 7200, accounting for nearly 7 percent of all local government employment. Just more than 55 percent of the jobs in this category were classified as "all other managers". Sales, was the occupation in this industrial sector to command the smallest number of positions.

Occupational Staffing Patterns in Local Government
as of May 1979 1/

Occupational Title	Estimated Employment 2/	Percent of Total Employment 3/	Relative Error 4/
TOTAL ALL OCCUPATIONS	107,300	100.00	N/A
Managers, Officers, and Public Administration Inspectors	7,200	6.71	N/A
Public Administration Inspectors	1,340	1.25	4
Construction Inspectors	990	0.92	16
Chief Executives, General Administrators and Legislators	890	0.83	24
All Other Managers and Officers	3,980	3.71	14
Professional Occupations	11,340	10.57	N/A
Civil Engineers	570	0.53	26
Electrical and Electronics Engineers	220	0.21	48
Mechanical Engineer	20	0.02	42
Safety Engineer	10	0.01	42
Traffic Engineer	20	0.02	47
All Other Engineers	60	0.06	N/A
Chemist	40	0.04	41
Agricultural Scientist	20	0.02	47
Forester and Conservation Scientist	20	0.02	30
Economist	20	0.02	20
Urban and Regional Planner	310	0.29	23
All Other Social Scientists	30	0.03	N/A
Systems Analyst, E.D.P.	50	0.05	19
Photographer	80	0.07	19
Purchasing Agent and/or Buyer	150	0.14	7
Accountants and Auditors	460	0.43	15
Landscape Architect	20	0.02	37
Architect	40	0.04	31
Budget Analyst	120	0.11	16
Caseworker	810	0.75	32
Dietician and/or Nutritionist	10	0.01	35
Law Clerk	30	0.03	22
Lawyer	400	0.37	17
Librarian, Professional	1,060	0.99	22
Nurse, Professional	560	0.52	34
Paralegal Personnel	220	0.21	34
Personnel and Labor Relations Specialists	200	0.19	16
Physician and/or Surgeon	200	0.19	34
Public-Relations Practitioner	90	0.08	34
Community Organization Worker	180	0.17	23
Welfare Investigator	20	0.02	39
Judge	150	0.14	39
Magistrate	10	0.01	13
Assessor	340	0.32	9
Group Recreation Worker	1,840	1.71	31
All Other Professional Workers	2,960	2.76	N/A

Local Government (cont.)

Occupational Title	Estimated Employment 2/	Percent of Total Employment 3/	Relative Error 4/
Technical Occupations	1,590	1.48	N/A
Computer Programmer	80	0.07	13
Drafter	50	0.05	27
Electrical and Electronics Technician	40	0.04	27
Surveyor	70	0.07	31
Civil Engineering Technician	160	0.15	27
All Other Engineering Technicians	90	0.08	N/A
Technical Assistant Library	920	0.86	17
Medical and Dental Technicians and Technologists	60	0.06	43
All Other Technicians	120	0.11	N/A
Service Occupations	40,020	37.30	N/A
Supervisor, Nonworking-Service	180	0.17	27
Janitors, Porters and Cleaners	2,670	2.49	13
Kitchen Helper	160	0.15	28
Cook, Institution	170	0.16	23
All Other Food Service Workers	70	0.07	30
Recreation Facility Attendant	150	0.14	26
Forest Conservation Worker	140	0.13	40
School Crossing Guard	2,500	2.33	18
Social Service Aide	130	0.12	49
Police and Detective Supervisor	2,440	2.27	22
Detective, Police	1,000	0.93	34
Police Patrol Officer	10,860	10.12	22
Correction Officer and /or Jailer	940	0.88	32
Bailiff	510	0.48	49
Fire Inspector	60	0.06	25
Fire Fighter	11,740	10.94	19
Fire Fighting and Prevention Supervisor	3,200	2.98	20
All Other Service Workers	3,100	2.89	N/A
Maintenance and Production Occupations	30,430	28.36	N/A
Supervisor, Nonworking	1,250	1.16	36
Mechanic, Automotive	1,670	1.56	46
Diesel Mechanic	20	0.02	44
Electric-Meter Installer	30	0.03	27
Gas Meter Installer	20	0.02	34
Engineering-Equipment Mechanic	40	0.04	20
Hydroelectric-Machinery Mechanic	20	0.02	27
Mechanic Maintenance	230	0.21	33
Radio Mechanic	50	0.05	37
Treatment-Plant Mechanic	50	0.05	27
Water Meter Installer	80	0.07	31
All Other Mechanics and Repairers	950	0.89	54
Truck Driver	1,070	1.00	19
Bricklayer	90	0.08	37
Carpenter	540	0.50	26
Cement Mason	120	0.11	21
Crane, Derrick and Hoist Operator	70	0.07	22

Local Government (Cont.)

Occupational Title	Estimated Employment 2/	Percent of Total Employment 3/	Relative Error 4/
Heavy Equipment Operator	1,510	1.41	20
Industrial Truck Operator	90	0.08	37
Line Installer-Repairer	320	0.30	31
Maintenance Repairer General Utility	1,240	1.16	42
Helper, Trades	390	0.36	35
Painter, Maintenance	360	0.34	19
Pipelayer	200	0.19	38
Plumber and/or Pipefitter	270	0.25	30
Press Operator and /or Plate Printer	80	0.07	39
Refuse Collector	900	0.84	40
Stationary Boiler Firer	210	0.20	28
Stationary Engineer	150	0.14	23
Street-Light Repairer and Servicer	250	0.23	14
Animal Caretaker	110	0.10	26
Watershed Tender	10	0.01	41
Water Treatment Plant Operator	220	0.21	43
Pump Station Operator, Waterworks	150	0.14	33
Welder and/or Flamecutter	120	0.11	14
Highway-Maintenance Man	1,830	1.71	22
Surveyor Helper	50	0.05	40
Gardeners and Groundskeepers	1,280	1.19	29
Ambulance Driver and/or Attendant	100	0.09	26
All Other Skilled Workers	2,940	2.74	N/A
All Other Semiskilled Workers	7,360	6.86	N/A
All Other Unskilled Workers	3,990	3.72	23
Clerical Occupations	16,680	15.55	N/A
Clerical Supervisor	390	0.36	33
Bookkeeping and/or Billing Machine Operator	170	0.16	32
Computer Operator	90	0.08	16
Keypunch Operator	120	0.11	12
Duplicating Machine Operator	120	0.11	46
All Other Office Machine Operators	160	0.15	37
Stenographer	860	0.80	19
Accounting Clerk	660	0.62	25
Bookkeeper, Hand	330	0.31	31
File Clerk	60	0.06	45
General Clerk, Office	2,670	2.49	36
Library Assistant	1,490	1.39	19
Mail Clerk	20	0.02	33
Payroll and/or Timekeeping Clerk	270	0.25	29
Personnel Clerk	90	0.08	23
Procurement Clerk	40	0.04	45
Receptionist	60	0.06	28
Secretary	900	0.84	13
Statistical Clerk	60	0.06	25
Switchboard Operator	180	0.17	15
Switchboard Operator-Receptionist	50	0.05	29
Messenger	190	0.18	48

Local Government (cont.)

Occupational Title	Estimated Employment 2/	Percent of Total Employment 3/	Relative Error 4/
Typist	3,170	2.95	17
Court Clerk	440	0.41	49
Town Clerk	110	0.10	14
All Other Office Clerical Workers	2,690	2.51	N/A
Meter Reader, Utilities	190	0.18	22
Production Clerk and/or Coordinator	30	0.03	45
Shipping and/or Receiving Clerk	50	0.05	47
Weigher, Recordkeeping	20	0.02	27
Stock Clerk, Stockroom	210	0.20	17
Dispatcher, Vehicle, Service or Work	110	0.10	38
Dispatcher, Police, Fire and Ambulance	660	0.62	23
All Other Plant Clerical	20	0.02	75
Sales Occupations	40	0.04	N/A

1/ Coverage does not include hospitals and educational activities such as elementary and secondary schools, vocational high schools, universities, colleges, junior colleges and technical institutes.

2/ Estimated employment rounded to nearest ten.

3/ Percent of total employment rounded to two decimal places.

4/ Relative error rounded to nearest unit.

Detail may not add to total due to rounding.

S 3860-1.5

AN OCCUPATIONAL PROFILE

OF

EDUCATIONAL EMPLOYMENT

IN

MASSACHUSETTS

1979

REPORT NUMBER 12

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Our sincere appreciation is extended to the many municipalities and institutions who participated in this survey, without whose support this labor market information would not be available.

Particular acknowledgements are due to Gregory Anrig, Commissioner of Education, for his full support of this undertaking, and to Daryl Delano, of the Boston Regional Office, Bureau of Labor Statistics, for his technical assistance in generating these employment estimates.

INTRODUCTION

The results of this survey and a soon to be published survey of Hospitals, give us a nearly complete occupational profile of all nonagricultural covered employment.

This information is now being used in constructing an industry-occupation matrix and will be used as a data base for projecting future manpower requirements. This program which was started in the early 1970's, is now meeting the needs of economists, employment specialists, educators, and planners.

With the passage of proposition 2½ in Massachusetts, the data contained in this publication and in a recently published profile of employment in State and Local Government, become most important. The users of these data should be aware that they are estimates, and that both sampling and non-sampling errors may exist. Because of the excellent response to this survey the errors should be at a minimum.

We will continue to update the results of these and other surveys on a triennial basis.

THE MAJOR OCCUPATIONAL CATEGORIES USED IN THE
OCCUPATIONAL EMPLOYMENT STATISTICS SURVEY

DESCRIPTION

MANAGERS AND OFFICERS

Includes persons concerned with policy making, planning, organizing, staffing, directing and/or who directly supervise the activities of the company or establishment workforce. Includes only managers and officers who are exempt from the minimum wage and overtime provisions of the Fair Labor Standard Act.

PROFESSIONAL OCCUPATIONS

Includes persons concerned with the theoretical or practical aspects of such fields as science, engineering, technical work, art, education, medicine, law and business relations. Most of these occupations require substantial educational preparation, usually at the university level.

TECHNICAL OCCUPATIONS

Includes all persons actually engaged in technical work utilizing theoretical knowledge of fundamental scientific, engineering, mathematical, computer programming, or draft design principles, comparable to those acquired through study at institutions with less extensive training than 4-year colleges.

SERVICE WORKERS

Includes those workers in occupations concerned with the performance of services for persons that require either direct contact or close association with the individual; occupations concerned with the protection of individuals or public or private property; occupations concerned with preparing and serving food and beverages; and occupations related to the cleaning of the interior and equipment of buildings, offices, stores, and similar places.

PRODUCTION AND MAINTENANCE WORKERS

Includes all skilled, semiskilled, and unskilled workers performing machine and manual tasks involving operating, maintenance, construction, repair, material handling, and powerplant operations.

The Major Occupational Categories (continued)

DESCRIPTION

CLERICAL OCCUPATIONS

Includes office and plant clerical personnel. Office clerical work involves preparing, transcribing, transferring, systematizing, and preserving communications and records; collating accounts and distributing information. Plant clerical work involves planning, coordinating, or expediting of production and the flow of work; or the clerical aspects of receiving, storing, issuing, or shipping of materials, merchandise, supplies, or equipment.

SALES OCCUPATIONS

Includes persons concerned wholly or primarily with selling when knowledge of the goods or services sold is required, such as sales agents, sales clerks, real estate agents, demonstrators, etc.

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MAJOR OCCUPATIONAL CATEGORIES

Occupational Category	Colleges And Universities		Public Schools		Private Schools	
	Employ.	Percent	Employ.	Percent	Employ.	Percent
Management	7,600	10.9	5,880	4.1	700	5.5
Professionals	36,540	52.3	90,720	63.0	8,000	63.3
Technical	2,430	3.5	160	0.1	20	0.1
Service	7,120	10.2	24,670	17.1	2,090	16.6
Maintenance and Production	2,960	4.2	1,570	1.1	450	3.5
Clerical	13,190	18.2	21,010	14.6	1,380	10.9
Sales	50	0.1	NA		NA	
TOTAL	69,890	100.0	144,010	100.0	12,640	100.0

As expected, the professional category dominated the staffing pattern of the educational institutions surveyed. Teaching occupations accounted for more than eighty percent of this category.

The management category had a range from 10.9 percent of employment in colleges and universities to a low of 4.1 percent in public schools. The 4.1 percent in public schools seems to dispel the belief that these systems are overladen with administrators. A previous survey of service type industries showed that nearly 12 percent of employment consisted of Managers and Officers, and a Local Government survey indicated 6.7 percent in this classification.

Janitors, Porters and Cleaners, and occupations relating to cafeterias accounted for 98 percent of employment in the service category.

In public schools teacher's aides dominated the clerical occupations, while in colleges and universities secretaries accounted for most employment in this category.

OCCUPATIONAL EMPLOYMENT FOR PUBLIC ELEMENTARY AND SECONDARY SCHOOLS

APRIL 1979

OCCUPATION	EMPLOYMENT	
	Number 1/	Percent
Management	5,880	4.08
Superintendent	890	0.62
Principal	2,220	1.54
Assistant Principal	1,380	0.96
All Other Managers	1,380	0.96
Professionals	90,720	63.00
Secondary School Teacher	41,000	28.50
Elementary/Preschool Teacher	36,390	23.30
Education/Vocational Counselor	2,820	1.96
Librarian, Professional	1,210	0.84
Nurse/Professional	1,120	0.78
Curriculum Specialist	980	0.68
Adult School Teacher Nonvocationsl	980	0.68
Adult School Teacher Vocational	940	0.65
Speech and Hearing Clinicians	940	0.65
Case Worker	810	0.56
Psychologist	390	0.27
All Other Teachers	2,710	1.90
All Other Professionals	450	0.31
Technical Workers	160	0.11
Service Workers	24,670	17.10
Janitors, Porters and Cleaners	9,780	6.80
Kitchen Helpers	6,440	4.50
Cook Institutions	3,360	2.30
Counter Attendant, Cafeteria	2,740	1.90
School Monitor	1,660	1.20
All Other Service Workers	710	0.49
Maintenance and Production Workers	1,570	1.10
Bus Drivers	710	0.49
Maintenance Repairer, General Utility	590	0.41
All Other Maintenance	270	0.19
Clerical Workers	21,010	14.60
Teacher Aide	12,100	8.40
General Office Clerk	4,260	3.00
Secretary	3,590	2.50
Bookkeeper	580	0.40
All Other Clerical Workers	490	0.34
TOTAL	144,010	100.00

1/ May not add due to rounding

OCCUPATIONAL PROFILE FOR PRIVATE ELEMENTARY AND SECONDARY SCHOOLS

APRIL 1979

OCCUPATION	EMPLOYMENT	
	Number 1/	Percent
Management	700	5.50
Principal	240	1.90
Assistant Principal	170	1.30
All Other Managers	290	2.30
Professionals	8,000	63.30
Secondary School Teachers	4,390	34.80
Elementary/Preschool Teachers	2,720	21.50
Librarian, Professional	310	2.50
Nurse Professional	170	1.30
Education/Vocational Councelor	140	1.10
Caseworker	80	0.66
All Other Professional Workers	180	1.40
Technical Workers	20	0.14
Service Workers	2,090	16.60
Janitors, Porters, and Cleaners	980	7.80
Child-Care Workers	310	2.50
Counter Attendant, Cafeteria	300	2.40
Kitchen Helper	210	1.70
Cook, Institution	160	1.30
All Other Service Workers	130	1.00
Maintenance and Production Workers	450	3.50
Maintenance Repairer, General Utility	270	2.10
Gardeners and Groundskeepers	170	1.30
All Other Maintenance	10	0.07
Clerical Workers	1,380	10.90
Secretary	500	4.00
General Clerk, Office	330	2.60
Teacher Aide	220	1.70
Bookkeeper, Hand	150	1.20
All Other Clerical Workers	180	1.40
TOTAL	12,625	100.00

1/ May not add due to rounding

OCCUPATIONAL EMPLOYMENT FOR COLLEGES, UNIVERSITIES, PROFESSIONAL SCHOOLS, JUNIOR COLLEGES AND TECHNICAL SCHOOLS

APRIL 1979

OCCUPATION	EMPLOYMENT	
	Number 1/	Percent
Management	7,600	10.90
Professional Workers	36,540	52.30
Professor	5,670	8.10
Lecturer	5,440	7.80
Graduate Assistant	5,210	7.50
Associate Professor	5,160	7.40
Assistant	5,120	7.30
Teacher/Instructor, Post Secondary	2,520	3.60
Librarian, Professional	690	1.00
Physicist	620	0.90
Biological Scientist	580	0.80
Accountant	440	0.60
Chemist	410	0.60
Nurse, Professional	380	0.50
All Other Teachers	820	1.20
All Other Professional Workers	3,480	5.00
Technical Workers	2,430	3.50
Science Technician	1,580	2.30
Technical Assistant Library	340	0.50
All Other Technical Workers	520	0.70
Service Workers	7,120	10.20
Janitors, Porters, and Cleaners	4,130	5.90
Guards and Doorkeepers	870	1.20
Cook, Institution	560	0.80
Counter Attendant, Cafeteria	360	0.50
All Other Food Service Workers	660	1.00
All Other Service Workers	550	0.80
Maintenance and Production Workers	2,960	4.23
Maintenance Repairer, General Utility	830	1.20
Gardeners and Groundskeepers	480	0.70
All Other Maintenance and Production Workers	1,660	2.40

OCCUPATIONAL EMPLOYMENT FOR COLLEGES, UNIVERSITIES, PROFESSIONAL SCHOOLS, JUNIOR COLLEGES AND TECHNICAL SCHOOLS (con't.)

APRIL 1979

OCCUPATION	EMPLOYMENT	
	Number 1/	Percent
Clerical Workers	13,190	18.90
Secretary	3,980	5.70
General Clerk, Office	2,520	3.60
Typist	1,140	1.60
Library Assistant	930	1.30
Clerical Supervisor	680	1.00
Stenographer	660	1.00
Accounting Clerk	480	0.70
All Other Clerical Workers	2,800	4.00
Sales Workers	50	0.07
TOTAL	69,880	100.00

1/ May not add due to rounding

S 3860-1.6

AN OCCUPATIONAL PROFILE

OF

WHOLESALE AND RETAIL TRADE

AND

SELECTED REGULATED INDUSTRIES

IN

MASSACHUSETTS

1979

REPORT NUMBER 13

Prepared by

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INTRODUCTION

This publication is the thirteenth in a series on current occupational profiles of Massachusetts industries. A recent publication, An Occupations Profile of Educational Employment, and a soon to be published survey of hospitals, give us a nearly complete profile of all nonagricultural covered employment.

This information is now being used in constructing an updated industry-occupation matrix, and will be used as a data base for projecting future employment needs.

The demand for this data by economists, employment specialists, educators and private industrial firms clearly demonstrates the need for this and other labor market information.

METHODOLOGY

The Sample

The second quarter 1979 report (ES 202) of employment and wages covered by the Massachusetts Employment Security Law was used as a sampling frame for the Occupational Employment Statistics survey of non-manufacturing establishments.

The sampling frame was stratified by three-digit SIC's (Standard Industrial Classification) and by nine employment size classes. Establishments with less than four employees were excluded from the sample, and all units with employment of two hundred and fifty or more were automatically included. All other establishments were subject to sample selection on a random basis, with the units in larger size classes having a proportionally higher chance of selection. Each unit was given a weight according to the proportion of firms selected in each size class. The sample included 4528 establishments with benchmark employment of 327,310.

The Survey and Response

Each establishments was mailed a survey schedule; telephone calls and personal visits were made where the data was critical for calculating valid estimates. As many as two follow-up schedules were mailed to nonrespondents. Of the 4528 establishments in the survey, replies were received from 3028, or 69 percent. After manual editing and mechanical (computer) screening, 2836 responses with total employment at 209,589 were determined usable, 64 percent of the sample employment.

The Estimating Procedure

All usable responses were stratified into seven size groups, by industry. Reported total employment (or the summed occupational employment) from each usable response was multiplied by the weight assigned during sample selection. These industry data were then divided into the employment in the ES 202 report for the reference month of the survey (stratified by corresponding size class cells). The result produced by the procedure is known as the benchmark factor. This factor was then applied to the occupation data, thus accounting for nonresponse. These occupational estimates were then summed across size classes in industry totals.

Sampling Error

Sampling error is an arithmetic measure of the precision of the estimate. It is the difference between the estimate computed from the sample and the result that would have been obtained if the same methods were used

to collect identical information from the universe. The relative errors listed in this report are the sampling errors of each occupation expressed as a percent of that occupational estimate. The relative errors shown are such that the chances are 2 out of 3 that the results of collecting identical information from the entire population would not differ by more than the percent of relative error shown; the chances are 19 out of 20, 95 percent, that the results of collecting identical information from the entire population would not differ by more than twice the percent shown. For example, it is estimated in this report that there are 1,980 Buyers in SIC 50 and 51 - Wholesale Trade - accounting for 1.52 percent of total employment in the industry. Thus the chances are 68 out of 100 that the results of collecting identical information from the entire population would differ by less than 119 (6 percent) from the 1,980 estimated; similarly the estimated 1.87 percent of total employment would differ by less than 0.09 percent of total employment.

Nonsampling Error

The results of this survey are subject to nonsampling errors as well. Although careful editing and screening steps were taken, some errors in processing and computation may have occurred. These errors could be from faulty schedule design or an inability to collect data as defined. Responding establishments may account for some errors because of inaccuracy of data furnished such as placing workers in a wrong occupation. The nonrespondents are a source of nonsampling error for which measures are not available but are reflected in the estimating procedure.

BALANCE OF NONMANUFACTURING TWO DIGIT INDUSTRY

SIC CODE	DESCRIPTION
41	LOCAL & SUBURBAN TRANSIT AND INTERURBAN HIGHWAY AND PASSENGER TRANSPORTATION

This major group includes establishment primarily engaged in furnishing local and suburban passenger transportation, such as those providing passenger transportation within a single municipality and its suburban areas by bus, rail, or subway, either seperately or in combination.

42 MOTOR FREIGHT TRANSPORTATION AND WAREHOUSING

This major group includes establishments furnishing local and long-distance trucking, or transfer services, or those engaged in the storage of farm products, furniture, and other household goods, or commercial goods of any nature.

44 WATER TRANSPORTATION

This major group includes establishments engaged in freight and passenger transportation on the open sea or inland waters, and establishments furnishing such incidental services as lighterage, towing, and canal operation. This major group also includes excursion boats, sight seeing boats and watertaxis.

45 TRANSPORTATION BY AIR

This major group includes establishments engaged in furnishing domestic and foreign transportation by air and also those operating airports and flying fields and furnishing terminal services.

46 PIPELINE TRANSPORTATION

This major group includes establishments primarily engaged in the pipe line transportation of petroleum or other commodities, except natural gas.

47 TRANSPORTATION SERVICES

This major group includes establishments furnishing services incidental to transportation, such as forwarding and packing services, and the arrangement of passenger and freight transportation.

BALANCE OF NONMANUFACTURING TWO DIGIT INDUSTRY (Continued)

SIC CODE	DESCRIPTION
48	COMMUNICATION

This major group includes furnishing point to point communication service, whether by wire or radio, and whether intended to be received aurally or visually; and radio and television broadcasting.

49	ELECTRIC, GAS, AND SANITARY SERVICES

This major group includes establishments engaged in the generation, transmission and/or distribution of electricity or gas or steam. Water and irrigation systems, and sanitary systems engaged in the collection and disposal of garbage, sewage, and other wastes are also included.

50	WHOLESALE TRADE - DURABLE GOODS

This major group includes establishments primarily engaged in the wholesale distribution of durable goods.

51	WHOLESALE TRADE - NONDURABLE GOODS

This major group includes establishments primarily engaged in the wholesale distribution of nondurable goods.

52	BUILDING MATERIALS, HARDWARE, & MOBILE HOMES

This major group includes retail establishments primarily engaged in selling lumber and other building materials; paint; glass and wallpaper, hardware; nursery stock; lawn and garden supplies; and mobile homes.

53	GENERAL MERCHANDISE STORES

This major group includes retail stores which sell a number of lines of merchandise such as Dept. Stores, Variety Stores and General Stores.

54	FOOD STORES

This major group includes retail stores primarily engaged in selling food for home preparation and consumption.

55	AUTO DEALERS AND GASOLINE SERVICE STATIONS

This major group includes retail dealers selling new and used automobiles, boats, recreational and utility trailers, and motorcycles; those selling new automobile parts and accessories; and gasoline service stations.

BALANCE OF NONMANUFACTURING TWO DIGIT INDUSTRY (Continued)

SIC CODE	DESCRIPTION

56 APPAREL AND ACCESSORY STORES

This major group includes retail stores primarily engaged in selling new clothing, shoes, hats, underwear, and related articles for personal wear and adornment. Furriers and custom tailors carrying stocks of materials are also included in this group.

57 FURNITURE AND HOME FURNISHINGS STORES

This major group includes retail stores selling goods used for furnishing the home, such as furniture, floor coverings, draperies glass and chinaware, domestic stoves, refrigerators, and other household electrical and gas appliances.

58 EATING AND DRINKING PLACES

This major group includes retail establishments selling prepared foods and drinks for consumption on the premises, and also lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption.

59 MISCELLANEOUS RETAIL

This major group includes retail establishments, not elsewhere classified, including drug stores, liquor stores, used merchandise stores, nonstore retailers, fuel and ice dealers, and other miscellaneous retailers.

THE MAJOR OCCUPATIONAL CATEGORIES USED IN THE
OCCUPATIONAL EMPLOYMENT STATISTICS SURVEY

OES CODE	DESCRIPTION
10000	MANAGERS AND OFFICERS
	Includes persons concerned with policy making, planning, organizing, staffing, directing and/or who directly supervise the activities of the company or establishment workforce. Includes only managers and officers who are exempt from the minimum wage and overtime provisions of the Fair Labor Standards Act.
20000	PROFESSIONAL OCCUPATIONS
	Includes persons concerned with the theoretical or practical aspects of such fields as science, engineering, technical work, art, education, medicine, law and business relations. Most of these occupations require substantial educational preparation, usually at the university level.
30000	TECHNICAL OCCUPATIONS
	Includes all persons actually engaged in technical work utilizing theoretical knowledge of fundamental scientific, engineering, mathematical, computer programming, or draft design principles, comparable to those acquired through study at institutions with less extensive training than 4-year colleges.
40000	SERVICE WORKERS
	Includes those workers in occupations concerned with the performance of services for persons that require either direct contact or close association with the individual; occupations concerned with the protection of individuals or public or private property; occupations concerned with preparing and serving food and beverages; and occupations related to the cleaning of the interior and equipment of buildings, offices, stores, and similar places.
50000	PRODUCTION AND MAINTENANCE WORKERS
	Includes all skilled, semiskilled, and unskilled workers performing machine and manual tasks involving operating, maintenance, construction, repair, material handling, and powerplant operations.

The Major Occupational Categories (Continued)

OES CODE	DESCRIPTION
60000	CLERICAL OCCUPATIONS

Includes office and plant clerical personnel. Office clerical work involves preparing, transcribing, transferring systematizing, and preserving communications and records; collating accounts and distributing information. Plant clerical work involves planning, coordinating, or expediting of production and the flow of work; or the clerical aspects of receiving, storing, issuing, or shipping of materials, merchandise, supplies, or equipment.

70000	SALES OCCUPATIONS

Includes persons concerned wholly or primarily with selling when knowledge of the goods or services sold is required, such as sales agents, sales clerks, real estate agents, demonstrators, etc.

BALANCE OF NONMANUFACTURING
Employment Trends 1976 - 1979

SIC 1/ CODE	Reference Month	1976 2/	1977 2/	1978 2/	1979 3/	Percent Change 1976 - 1979
41	June	15434	15192	15794	17124	10.9
42	May	25604	26276	27626	28225	10.2
44	April	2218	2321	2654	2149	- 3.1
45	June	7392	7869	8634	9858	33.4
46 4/	June	-	-	-	-	-
47	April	3853	4036	4440	5179	34.4
48	June	35688	35307	35482	36654	2.7
49	April	18734	18288	18492	17996	- 3.9
50	June	59761	61944	64646	69089	15.6
51	June	56623	56422	58829	61116	7.9
52	June	12941	13128	13367	14245	10.1
53	June	54060	54090	56885	56617	4.7
54	June	74911	75649	75780	77242	3.1
55	June	41561	42297	44442	42272	1.7
56	June	28326	29846	30756	32836	15.9
57	June	15110	14509	14766	15455	2.3
58	June	124011	128875	136010	148833	20.0
59	June	57763	58998	61775	63979	10.8
TOTAL		634000	645100	670400	698900	10.2

1/ 1972 Edition SIC Manual
Source ES-202
2/ ES-202 figures are revised where necessary to eliminate the effect of changes due to industry re-coding
3/ Totals are revised and thus may differ slightly from those in the occupational tables
4/ Less than 100 employment

DISTRIBUTION OF EMPLOYMENT SUBJECT TO THE
MASSACHUSETTS EMPLOYMENT SECURITY LAW 1/
JUNE 1979

INDUSTRY	EMPLOYMENT	PERCENT OF TOTAL
Agriculture	16,691	0.7
Mining	933	0.1
Construction	85,512	3.8
Manufacturing	681,403	30.8
Trans., Comm., Utilities	119,286	5.4
Wholesale, Retail Trade	581,684	26.3
Fin., Ins., Real Estate	148,173	6.7
Services	578,513	26.2
TOTAL	2,212,195	100.0

1/ Excludes Government

Survey Coverage

Source: ES 202 State Summary

S I C

41 - 44 - 45 - 47

These Transportation related industries have had an employment growth of more than 18 percent in the last three years. Transportation by Air (SIC 45) had an increase of over 30 percent. Although employment in this industry is less than 0.5 percent of total employment in the State, it is vital to the entire economy. Logan International Airport, now the tenth busiest airport in the nation, handled 500.2 million pounds of air freight and mail in fiscal 1980. Massachusetts with its high technology industries relies heavily on Air Transportation for efficient and reliable transportation of parts and finished products.

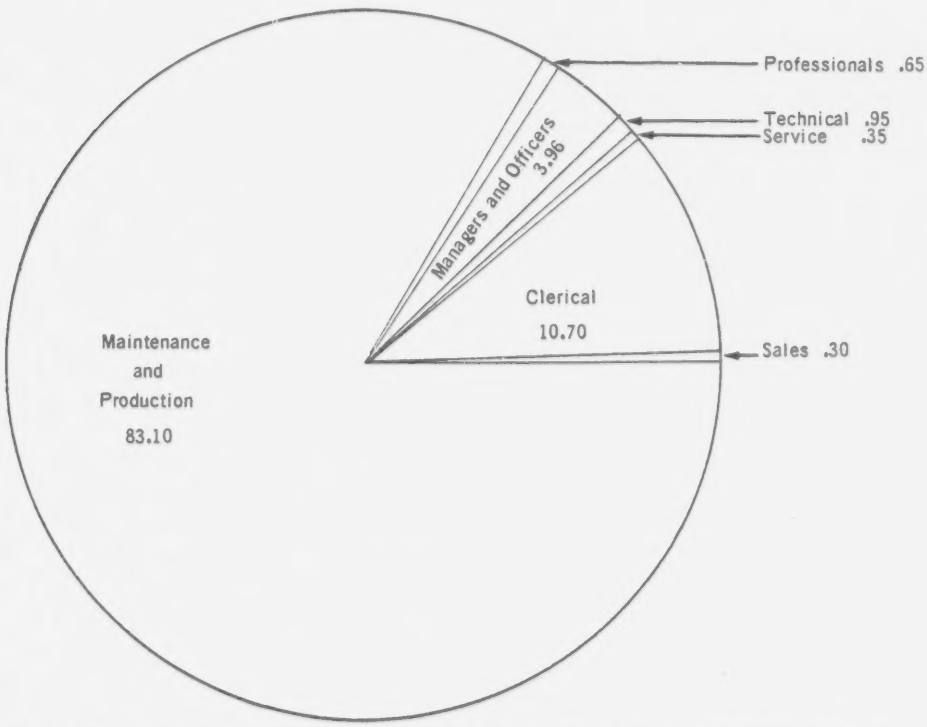
Also vital to the economy is the transportation of passengers. In 1980 more than 15 million passengers used this facility, making it the fastest growing international gateway on the East Coast. More than two million of these passengers were international travelers. The economic effect on employment and dollars spent by these passengers reaches many and varied industries. It should be noted when analyzing the profile of Transportation by Air, that some of the carriers have headquarters in other states and that many employees in Management, Professional and Technical occupations are carried on the payroll of that state. Thus, these three occupational groups only account for 20 percent of employment.

Over eighty-percent of employment in the Local and Interurban Passenger industry (SIC 41), is in the Maintenance and Production Category, while Management accounts for less than 4 percent. In the Transportation Services industry (SIC 47), nearly one out of every three jobs is in the occupation travel agent.

LOCAL AND INTERURBAN PASSENGER TRANSIT (SIC 41)

This major group includes establishment primarily engaged in furnishing local and suburban passenger transportation, such as those providing passenger transportation within a single municipality and its suburban areas by bus, rail, or subway, either separately or in combination.

DISTRIBUTION OF EMPLOYMENT BY MAJOR OCCUPATIONAL CATEGORY



Ranked Occupational Employment in the Local and Interurban Passenger Transit

1. Bus Driver, School	5,640	3. Bus Driver	2,600
2. Taxi Driver	3,150	4. Managers and Officers	670
		5. Dispatcher	560

These 5 occupations make up 75% of total industry employment

OCCUPATIONS OF EMPLOYEES
LOCAL AND INTERSUBURBAN PASSENGER TRANSPORTATION (SIC 41)

Reference Date June 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	670	3.96	N/A
Professional Occupations	110	0.65	N/A
Technical Occupations	160	0.95	N/A
Service Occupations	60	0.35	N/A
Janitors, Porters, and Cleaners	40	0.24	13
All Other Service Workers	20	0.12	N/A
Maintenance and Production Occupations	14,060	83.10	N/A
Supervisor, Nonworking	100	0.59	14
Mechanic, Auto	550	3.25	5
Body Repairer, Auto	140	0.83	19
Diesel Mechanic	180	1.06	12
Truck Driver	530	3.13	21
Baggage Handler	40	0.24	16
Bus Driver	2,620	15.48	13
Cleaner, Vehicle	210	1.24	9
Helper, Trades	30	0.18	27
Taxi Driver	3,150	18.62	8
Fuel Pump Attendant	90	0.53	12
Chauffeur	290	1.71	16
Bus Driver, School	5,640	33.23	1
Ambulance Driver/Attendant	490	2.90	28
Clerical Occupations	1,810	10.70	N/A
Accounting Clerk	40	0.24	18
Bookkeeper, Hand	60	0.35	16
Cashier	60	0.35	13
General Clerk	440	2.60	9
Information Clerk	70	0.41	12
Payroll/Timekeeping Clerk	90	0.53	12
Secretary	70	0.41	13
Switchboard Operator	170	1.00	11
Switchboard Operator/Receptionist	100	0.59	23
Ticket Agent	60	0.35	27
All Other Office Clerical Workers	10	0.06	N/A
Stock Clerk, Storeroom	10	0.06	19

SIC 41 (cont.)

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Meter Reader, Taxi	30	0.18	18
Dispatcher, Vehicle	560	3.31	8
Dispatcher, Police	40	0.24	28
Sales Occupations	50	0.30	N/A
TOTAL	16,920	100.00	N/A

OCCUPATIONS OF EMPLOYEES
INTERCITY HIGHWAY TRANSPORTATION (SIC 413)

Reference Date June 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	40	3.60	N/A
Service Occupations	20	1.80	N/A
Maintenance and Production Occupations	920	82.88	N/A
Mechanic, Auto	60	5.41	28
Bus Driver	530	47.75	12
Cleaner, Vehicle	70	6.31	29
All Other Skilled Workers	40	3.60	N/A
All Other Semiskilled Workers	170	15.32	N/A
All Other Unskilled Workers	50	4.50	N/A
Clerical Occupations	130	11.71	N/A
General Clerk	30	2.70	35
Secretary	10	0.90	20
Dispatcher, Vehicle	20	1.80	32
All Other Clerical Workers	70	6.31	N/A
TOTAL	1,110	100.00	N/A

OCCUPATIONS OF EMPLOYEES
SCHOOL BUSES (SIC 415)

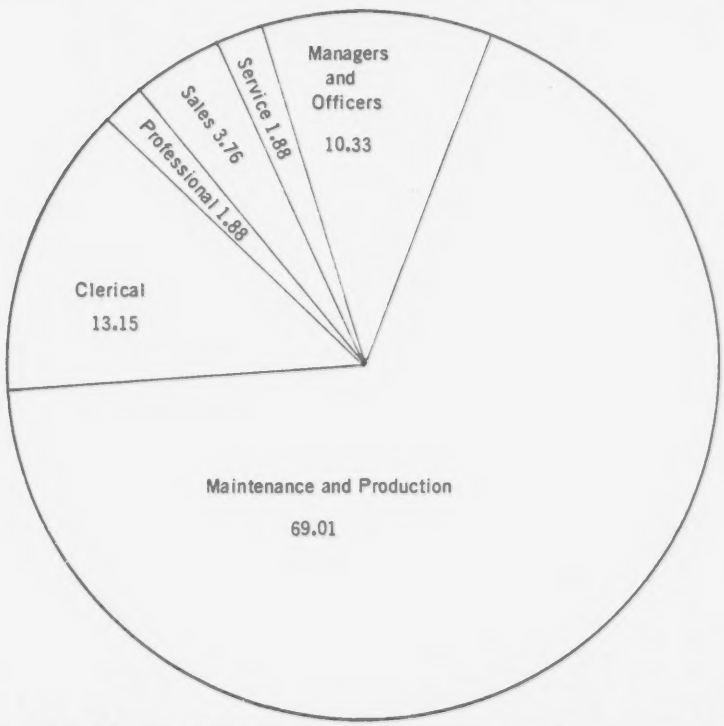
Reference Date June 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	190	2.92	N/A
Professional Occupations	30	0.46	N/A
Maintenance and Production Workers	6,080	93.39	N/A
Mechanic, Auto	170	2.61	22
Bus Driver	290	4.45	48
Cleaner, Vehicle	50	0.77	47
Fuel Pump Attendant	20	0.31	46
Bus Driver, School	5,390	82.80	3
All Other Skilled Workers	60	0.92	N/A
All Other Semiskilled Workers	100	1.54	N/A
Clerical Occupations	180	2.76	N/A
General Clerk	50	0.77	39
Information Clerk	20	0.31	29
Dispatcher, Vehicle	50	0.77	36
All Other Clerical Workers	60	0.92	N/A
Sales Occupations	30	0.46	N/A
TOTAL	6,510	100.00	N/A

WATER TRANSPORTATION (SIC 44)

This major group includes establishments engaged in freight and passenger transportation on the open sea or inland waters, and establishments furnishing such incidental services as lighterage, towing, and canal operation. This major group also includes excursion boats, sight seeing boats and watertaxis.

DISTRIBUTION OF EMPLOYMENT BY MAJOR OCCUPATIONAL CATEGORY



Ranked Occupational Employment in the Water Transportation

1. All Other Unskilled Workers	740	4. All Other Semiskilled Workers	110
2. Managers and Officers	220	5. Ordinary Seaman	100
3. All Other Managers	180		

These 5 occupations make up 64% of total industry employment

OCCUPATIONS OF EMPLOYEES
WATER TRANSPORTATION (SIC 44)

Reference Date April 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	220	10.33	N/A
Captain, Water Vessel	40	1.88	4
All Other Managers	180	8.45	N/A
Professional Occupations	40	1.88	N/A
Purchasing Agent/Buyer	10	0.47	16
Accountants/Auditors	30	1.41	13
Service Occupations	40	1.88	N/A
Food Service Workers	30	1.41	1
All Other Service Workers	10	0.47	N/A
Maintenance and Production Occupations	1,470	69.01	N/A
Supervisor, Nonworking	20	0.94	22
Marine Mechanic	90	4.23	10
Carpenter	70	3.29	11
Crane, Derrick, Hoist Operator	30	1.41	18
Rigger	30	1.41	30
Industrial Truck Operator	60	2.82	17
Marine, Service Station Attendant	40	1.88	15
Painter, Maintenance	60	2.82	16
Boat Patcher	40	1.88	17
Able Seaman	10	0.47	1
Ordinary Seaman	100	4.69	1
Motor Boat Operator	20	0.94	12
All Other Skilled Workers	50	2.35	N/A
All Other Semiskilled Workers	110	5.16	N/A
All Other Unskilled Workers	740	34.74	N/A
Clerical Occupations	280	13.15	N/A
Clerical Supervisor	40	1.88	18
Bookkeeper, Hand	10	0.47	19
General Clerk	30	1.41	13
Receptionist	10	0.47	21
Secretary	50	2.35	12
All Other Office Clerical Workers	90	3.76	N/A
Production Clerk	10	0.47	17
Shipping Packer	20	0.94	26
Shipping/Receiving Clerk	10	0.47	23
All Other Plant Clerical Workers	10	0.47	N/A

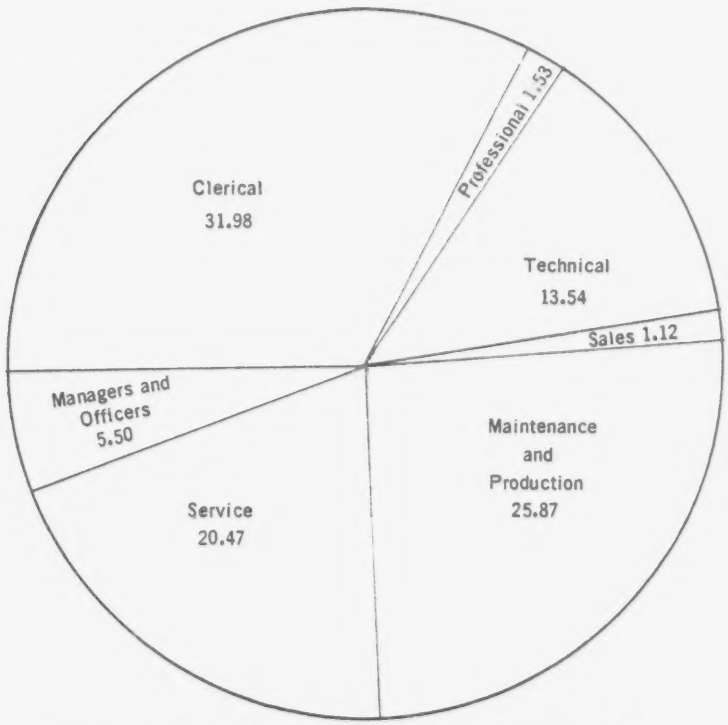
SIC 44 (cont.)

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Sales Occupations	80	3.76	N/A
Sales Representatives	70	3.29	7
Sales Clerks	10	0.47	33
TOTAL	2,130	100.00	N/A

TRANSPORTATION BY AIR (SIC 45)

This major group includes establishments engaged in furnishing domestic and foreign transportation by air and also those operating airports and flying fields and furnishing terminal services.

DISTRIBUTION OF EMPLOYMENT BY MAJOR OCCUPATIONAL CATEGORY



Ranked Occupational Employment in the Transportation by Air

1.	Flight Attendants	1,650	6.	Line-Service Attendant	780
2.	Airplane Pilot	1,310	7.	Managers and Officers	540
3.	Reservation Agent	1,160	8.	Transportation Agent	230
4.	Mechanic, Aircraft	1,010	9.	All Other Semiskilled Workers	200
5.	Ticket Agent	920	10.	Supervisor, Nonworking	170

These 10 occupations make up 82% of total industry employment

OCCUPATIONS OF EMPLOYEES
TRANSPORTATION BY AIR (SIC 45)

Reference Date June 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	540	5.50	8
Professional Occupations	150	1.53	N/A
Teacher, Vocational	90	0.92	10
Personnel/Labor Relations Specialist	10	0.10	18
All Other Professional Workers	50	0.51	N/A
Technical Occupations	1,330	13.54	N/A
Airplane Pilot	1,310	13.34	9
Radio Operator	10	0.10	8
All Other Technical Workers	10	0.10	N/A
Service Occupations	2,010	20.47	N/A
Supervisor, Non-working Service	60	0.61	20
Janitors, Porters, and Cleaners	100	1.02	16
Food Service	110	1.12	31
Flight Attendants	1,650	16.80	11
Baggage Porter	70	0.71	13
All Other Service Workers	20	0.20	N/A
Maintenance and Production Occupations	2,540	25.87	N/A
Supervisor, Nonworking	170	1.73	15
Mechanic, Aircraft	1,010	10.29	16
Mechanic, Auto	80	0.81	14
All Other Mechanics	10	0.10	N/A
Truck Driver	40	0.41	10
Baggage Handler	20	0.20	16
Cleaner, Vehicle	110	1.12	19
Maintenance Repairer, General Utl.	50	0.51	20
Helper, Trades	20	0.20	31
Line-Service Attendant	780	7.94	11
All Other Skilled Workers	10	0.10	N/A
All Other Semiskilled Workers	200	2.04	N/A
All Other Unskilled Workers	40	0.41	N/A
Clerical Occupations	3,140	31.98	N/A
Clerical Supervisor	90	0.92	30
Stenographer	20	0.20	28
Accounting Clerk	60	0.61	23
Reservation Agent	1,160	11.81	11
Adjustment Clerk	110	1.12	38
General Clerk	40	0.41	11
Payroll/Timekeeping Clerk	10	0.10	9

SIC 45 (cont.)

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Secretary	170	1.73	10
Ticket Agent	920	9.37	16
Typist	30	0.31	17
All Other Office Clerical Workers	70	0.71	N/A
Shipping/Receiving Clerk . . .	10	0.10	31
Stock Clerk	100	1.02	15
Dispatcher, Airplane	70	0.71	15
Crew Scheduler	40	0.41	13
Transportation Agent	230	2.34	15
All Other Plant Clerical Workers	10	0.10	N/A
Sales Occupations	110	1.12	N/A
Sales Representatives	100	1.02	9
Sales Clerk	10	0.10	15
TOTAL	9,820	100.00	N/A

OCCUPATIONS OF EMPLOYEES
CERTIFIED AIR TRANSPORTATION (SIC 451)

Reference Date June 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	430	4.99	N/A
Professional Occupations	60	0.70	N/A
Technical Occupations	1,280	14.87	N/A
Airplane Pilot	1,270	14.75	31
All Other Technical Workers	10	0.12	N/A
Service Occupations	1,900	22.07	N/A
Flight Attendants	1,650	19.16	36
Baggage Porter	70	0.81	42
All Other Service Workers	180	2.09	N/A
Maintenance and Production Occupations	1,950	22.65	N/A
Clerical Occupations	2,930	34.03	N/A
Reservation Agent	1,160	13.47	36
Secretary	130	1.51	41
All Other Office Clerical Workers	1,240	14.40	N/A
Crew Scheduler	40	0.46	41
All Other Plant Clerical Workers	360	4.18	N/A
Sales Occupations	60	0.70	N/A
TOTAL	8,610	100.00	N/A

OCCUPATIONS OF EMPLOYEES
AIR TRANSPORTATION SERVICES (SIC 458)

Reference Date June 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	80	7.92	N/A
Professional Occupations	70	6.93	N/A
Technical Occupations	40	3.96	N/A
Service Occupations	120	11.88	N/A
Maintenance and Production Occupations	480	47.52	N/A
Mechanic, Aircraft	100	9.90	29
Line-Service Attendant	230	22.77	23
All Other Skilled Workers	40	3.96	N/A
All Other Semiskilled Workers	30	2.97	N/A
All Other Unskilled Workers	80	7.92	N/A
Clerical Occupations	180	17.82	N/A
Secretary	40	3.96	31
All Other Office Clerical Workers	80	7.92	N/A
Transportation Agent	30	2.97	24
All Other Plant Clerical Workers	30	2.97	N/A
Sales Occupations	40	3.96	N/A
TOTAL	1,010	100.00	N/A

TRANSPORTATION SERVICES (SIC 47)

This major group includes establishments furnishing services incidental to transportation, such as forwarding and packing services, and the arrangement of passenger and freight transportation.

DISTRIBUTION OF EMPLOYMENT BY MAJOR OCCUPATIONAL CATEGORY

Ranked Occupational Employment in the Transportation Services

1.	Travel Agent	1,650	6.	Accounting Clerk	160
2.	Managers and Officers	960	7.	All Other Service Wkrs.	140
3.	General Clerk	670	8.	All Other Sales Wkrs.	130
4.	Bookkeeper, Hand	200	9.	Secretary	120
5.	Guide, Travel	170	10.	Typist	110

These 10 occupations make up 83% of total industry employment

OCCUPATIONS OF EMPLOYEES
TRANSPORTATION SERVICES (SIC 47)

Reference Date April 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	960	18.57	N/A
Professional Occupations	1,750	33.85	N/A
Accountants/Auditors	50	0.97	17
Travel Agent	1,650	31.91	6
All Other Professional Workers	50	0.97	N/A
Service Occupations	310	6.00	N/A
Guide, Travel	170	3.29	20
All Other Service Workers	140	2.71	N/A
Maintenance and Production Occupations	250	4.84	N/A
Supervisor, Nonworking	10	0.19	16
Truck Driver	70	1.35	15
Delivery and Route Workers	70	1.35	17
Industrial Truck Operator	30	0.58	10
All Other Skilled Workers	30	0.58	N/A
All Other Unskilled Workers	40	0.77	N/A
Clerical Occupations	1,670	32.30	N/A
Clerical Supervisor	50	0.97	23
Bookkeeping/Billing Machine Operator	10	0.19	25
Computer Operator	20	0.39	16
All Other Office Machine Operators	20	0.39	N/A
Accounting Clerk	160	3.09	22
Bookkeeper, Hand	200	3.87	7
File Clerk	20	0.39	14
General Clerk	670	12.96	11
Receptionist	50	0.97	10
Secretary	120	2.32	8
Switchboard Operator/Receptionist	30	0.58	14
Messenger	40	0.77	8
Typist	110	2.13	11
All Other Office Clerical Workers.	50	0.97	N/A
Shipping Packer	30	0.58	14
Shipping/Receiving Clerk	10	0.19	11
Stock Clerk	40	0.77	22
Dispatcher, Vehicle	10	0.19	9
All Other Plant Clerical Workers	30	0.58	N/A
Sales Occupations	230	4.45	N/A
Traffic Agent	100	1.93	16
All Other Sales Workers	130	2.51	N/A
TOTAL	5,170	100.00	N/A

S I C

481

Telephone Communication

This industry includes establishments primarily engaged in furnishing telephone communication service. This industry includes domestic, international, marine, mobile, and aeronautical services.

While employment in the Telephone Communications industry has remained nearly stagnant over the last three years, this should be considered significant when you take into account that the introduction of highly sophisticated electronic equipment, has automated so many services.

Most significant regarding employment in this industry is its stratification over the State. More than 150 communities have employment, with fifty having employment of over 100, and twenty-five having employment of over 250.

The increased competition in the industry would appear to be intensfying, resulting in the opening of more retail outlets.

The profile of employment shows that clerical occupations predominate, but followed closely by maintenance and production occupations. Somewhat surprising is that professional and technical occupations each account for less than one percent of total employment.

OCCUPATIONS OF EMPLOYEES
TELEPHONE COMMUNICATION (SIC 481)

Reference Date June 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	3,840	12.36	N/A
Professional Occupations	250	0.80	N/A
Systems Analyst	160	0.52	1
Writers/Editors	20	0.06	0
Personnel/Labor Relations Specialist	40	0.13	0
All Other Professional Workers	30	0.10	N/A
Technical Occupations	220	0.71	N/A
Computer Programmer	150	0.48	1
All Other Technicians	70	0.23	N/A
Service Occupations	360	1.16	N/A
Janitors, Porters, and Cleaners	310	1.00	1
Food Service Workers	20	0.06	0
All Other Service Workers	30	0.10	N/A
Maintenance and Production Occupations	12,700	40.89	N/A
Supervisor, Nonworking	5,090	16.39	0
Mechanic, Auto	170	0.55	1
Cable Splicer	760	2.45	1
Central Office Repairer	1,320	4.25	1
Inspector	80	0.26	1
Installer Repairer	920	2.96	4
Line Installer - Repairer	260	0.84	1
Station Installer	3,000	9.66	1
Stationary Engineer	140	0.45	1
Trouble Locator, Test Desk	950	3.06	1
All Other Skilled Workers	10	0.03	N/A
Clerical Occupations	13,520	43.53	N/A
Accounting Clerk	970	3.12	1
Collector	40	0.13	0
General Clerk	2,850	9.18	1
Private Branch Service Advisor	30	0.10	0
Secretary	270	0.87	4
Service Observer	150	0.48	1
Switchboard Operator	60	0.19	1
Typist	30	0.10	0
Central Office Operator	3,920	12.62	0

SIC 481 (cont.)

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Customer Service Representative . .	1,400	4.51	1
All Other Office Clerical Workers .	2,220	7.15	N/A
Production Clerk/Coordinator . . .	930	2.99	1
Stock Clerk	340	1.09	1
All Other Plant Clerical Workers .	310	1.00	N/A
Sales Occupations	170	0.55	N/A
Sales Representatives	160	0.52	1
Sales Clerks	10	0.03	1
TOTAL	31,060	100.00	N/A

S I C

49

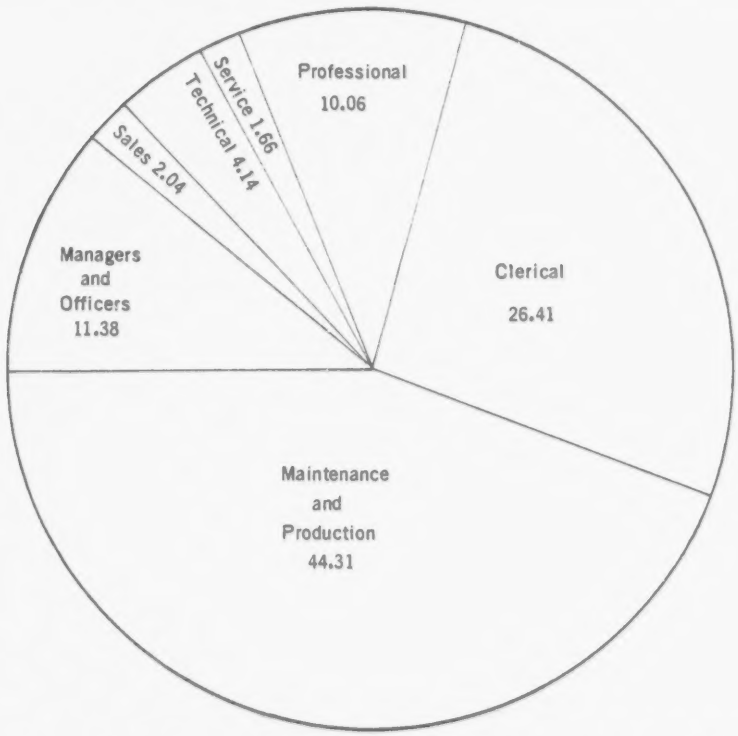
Employment in the Electric, Gas and Sanitary industry declined by nearly 4 percent between 1976 and 1979. This decline is at least partially accounted for by one company consolidating several establishments and by another closing its retail outlets.

An indication of the complexity of this industry group is the ninety-seven different publishable occupations. Maintenance and Production occupations represent nearly 45 percent of total employment, with Line-Installer Repairer being the single largest occupation in the group with 1240. There was one non-working supervisor for every 19 maintenance and production workers. Managers and Officers with employment of 2060 is the third largest occupational group (one manager for every nine employees).

ELECTRIC, GAS, AND SANITARY SERVICES (SIC 49)

This major group includes establishments engaged in the generation, transmission and/or distribution of electricity or gas or steam. Water and irregation systems, and sanitary systems engaged in the collection and disposal of garbage, sewage, and other wastes are also included.

DISTRIBUTION OF EMPLOYMENT BY MAJOR OCCUPATIONAL CATEGORY



Ranked Occupational Employment in the Electric, Gas, & Sanitary Service

1.	Managers and Officers 2,060	6.	All Other Semiskilled Workers 500
2.	Line-Installer Repairer 1,240	7.	All Other Mechanics and Repairers 450
3.	General Clerk 1,010	8.	Truck Driver 440
4.	Meter Reader, Utilities 590	9.	Supervisor, Nonworking 430
5.	Customer Service Representative 540	10.	All Other Unskilled Workers 390

These 10 occupations make up 42% of total industry employment

OCCUPATIONS OF EMPLOYEES
ELECTRIC, GAS, AND SANITARY SERVICES (SIC 49)

Reference Date April 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	2,060	11.38	N/A
Professional Occupations	1,820	10.06	N/A
Chemical Engineer	10	0.06	22
Civil Engineer	90	0.50	13
Electrical Engineer	370	2.04	12
Industrial Engineer	60	0.33	18
Mechanical Engineer	140	0.77	11
Nuclear Engineer	70	0.39	33
All Other Engineers	280	1.55	N/A
Natural and Mathematics Scientist	20	0.11	14
Systems Analyst, E.D.P.	90	0.50	17
Purchasing Agent/Buyer	60	0.33	10
Accountants/Auditors	230	1.27	10
Lawyer	10	0.06	17
Personnel/Labor Relations Specialist	70	0.39	7
Right-of-Way Agent	20	0.11	16
All Other Professional Workers	300	1.66	N/A
Technical Occupations	750	4.14	N/A
Computer Programmers	30	0.17	15
Drafter	140	0.77	6
Electrical/Electronic Technician	200	1.10	7
Surveyor	20	0.11	24
Estimator and Drafter, Utilities	110	0.61	11
All Other Engineering Technicians	70	0.39	10
All Other Technicians	180	0.99	N/A
Service Occupations	300	1.66	N/A
Supervisor, Nonworking Service	70	0.39	10
Janitors, Porters, and Cleaners	200	1.10	11
Guards and Doorkeepers	30	0.17	20
Maintenance and Production Occupations	8,020	44.31	N/A
Supervisor, Nonworking	430	2.38	16
Mechanic, Auto	280	1.55	6
Diesel Mechanic	30	0.17	14
Electric-Meter Installer	140	0.77	14
Mechanic, Maintenance	50	0.28	13
Household-Appliance Repairer	310	1.71	12
All Other Mechanics & Repairers	450	2.49	N/A

SIC 49 (cont.)

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Truck Driver	440	2.43	5
Cable Splicer	350	1.93	10
Control Room Operator	380	2.10	17
Corrosion Control Fitter	30	0.17	7
Crane, Derrick, and Hoist Operator	30	0.17	27
Electrician	300	1.66	7
Auxiliary Equipment Operator	140	0.77	27
Dispatcher, Gas	70	0.39	12
Gas-Pumping-Station Operator	30	0.17	12
Ground Worker, Utilities	80	0.44	10
Heavy Equipment Operator	190	1.05	7
Inspector	40	0.22	20
Instrument Repairer	130	0.72	15
Line-Installer Repairer	1,240	6.85	9
Machinist	30	0.17	21
Maintenance Repair, General Utility	320	1.77	17
Helper, Trades	140	0.77	7
Painter, Maintenance	30	0.17	12
Pipelayer	140	0.77	22
Plumber/Pipefitter	140	0.77	5
Power Reactor Operator	30	0.17	21
Refuse Collector	260	1.44	8
Stationary Boiler Firer	50	0.28	13
Stationary Engineer	50	0.28	29
Street-Light Repairer	60	0.33	16
Substation Operator	260	1.44	16
Switchboard Operator	30	0.17	18
Trouble Shooter	150	0.83	9
Water Treatment Plant Operator	10	0.06	8
Pump Station Operator	10	0.06	2
Welders and Flame Cutters	50	0.28	10
Dispatcher, Load	50	0.28	11
Tree Trimer	10	0.06	2
All Other Skilled Workers	170	0.94	N/A
All Other Semiskilled Workers	500	2.76	N/A
All Other Unskilled Workers	390	2.15	N/A
Clerical Occupations	4,780	26.41	N/A
Clerical Supervisor	150	0.83	6
Bookkeeping/Billing Machine Operators	40	0.22	12
Computer Operator	40	0.22	11
Keypunch Operator	100	0.55	15
All Other Office Machine Operators	70	0.39	N/A
Stenographer	50	0.28	16
Accounting Clerk	200	1.10	4

SIC 49 (cont.)

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Bookkeeper, Hand	60	0.33	9
Cashier	40	0.22	20
Collector	220	1.22	7
File Clerk	190	1.05	16
General Clerk	1,010	5.58	9
Order Clerk	20	0.11	8
Payroll/Timekeeping Clerk	40	0.22	6
Personnel Clerk	40	0.22	9
Receptionist	20	0.11	14
Secretary	350	1.93	6
Switchboard Operator	30	0.17	14
Switchboard Operator/Receptionist	10	0.06	15
Typist	150	0.83	9
Customer Service Representative	540	2.98	7
All Other Office Clerical Workers	370	2.04	10
Meter Reader, Utilities	590	3.26	5
Shipping/Receiving Clerk	20	0.11	9
Stock Clerk, Storeroom	190	1.05	13
Dispatcher, Vehicle	200	1.10	7
All Other Plant Clerical Workers	40	0.22	5
Sales Occupations	370	2.04	N/A
Sales Representatives	340	1.88	5
Sales Clerks	30	0.17	9
TOTAL	18,100	100.00	N/A

OCCUPATIONS OF EMPLOYEES
GAS PRODUCTION AND DISTRIBUTION (SIC 492)

Reference Date April 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	540	11.74	N/A
Professional Occupations	370	8.04	N/A
Systems Analyst, EDP	20	0.43	15
Purchasing Agent/Buyer	30	0.65	49
Accountants/Auditors	100	2.17	49
Personnel/Labor Relations Specialist	30	0.65	13
All Other Engineers	110	2.39	N/A
All Other Professional Workers	80	1.74	N/A
Technical Occupations	150	3.26	N/A
Drafter	60	1.30	24
Estimator and Drafter, Utilities	10	0.22	5
All Other Engineering Technicians	30	0.65	N/A
All Other Technicians	50	1.09	N/A
Service Occupations	70	1.52	N/A
Supervisor, Nonworking Service	50	1.09	41
Janitors, Porters, and Cleaners	20	0.43	32
Maintenance and Production Occupations	1,770	38.48	N/A
Supervisor, Nonworking	90	1.96	29
Mechanic, Auto	60	1.30	6
All Other Mechanics and Repairers	310	6.74	N/A
Corrosion Control Fitter	20	0.43	32
Dispatcher, Gas	60	1.30	43
Gas-pumping Station Operator	30	0.65	38
Heavy Equipment Operator	140	3.04	26
Instrument Repairer	80	1.74	32
Helper, Trades	60	1.30	37
Plumber/Pipefitter	120	2.61	16
Pump Station Operator	10	0.22	6
Welders/Flame Cutters	40	0.87	35
All Other Skilled Workers	210	4.57	N/A
All Other Semiskilled Workers	380	8.26	N/A
All Other Unskilled Workers	160	3.48	N/A
Clerical Occupations	1,510	32.83	N/A
Clerical Supervisor	70	1.52	35
Computer Operator	20	0.43	32
Keypunch Operator	30	0.65	31
Stenographer	20	0.43	13

SIC 492 (cont.)

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Accounting Clerk	130	2.83	9
Collector	100	2.17	37
General Clerk	140	3.04	16
Order Clerk	10	0.22	41
Payroll/Timekeeping Clerk	10	0.22	28
Secretary	150	3.26	35
Typist	80	1.74	23
Customer Service Representative	240	5.22	16
All Other Office Clerical Workers	110	2.39	N/A
Meter Reader, Utilities	190	4.13	23
Stockclerk	70	1.52	10
Dispatcher, Vehicle	110	2.39	27
All Other Plant Clerical Workers	30	0.65	22
Sales Occupations	190	4.13	N/A
Sales Representatives	160	3.48	24
Sales Clerks	30	0.65	28
TOTAL	4,600	100.00	N/A

OCCUPATIONS OF EMPLOYEES
COMBINATION GAS AND ELECTRIC COMPANIES (SIC 493)

Reference Date April 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	180	12.95	N/A
Professional Occupations	60	4.32	N/A
Electrical/Electronic Engineer	10	0.72	8
Mechanical Engineer	20	1.44	6
All Other Professional Workers	30	2.16	N/A
Technical Occupations	80	5.76	N/A
Electrical/Electronic Technician	70	5.04	5
All Other Technicians	10	0.72	N/A
Service Occupations	30	2.16	N/A
Maintenance and Production Occupations	430	30.94	N/A
Supervisor, Nonworking	50	3.60	2
House Appliance Repairer	10	0.72	50
All Other Mechanics and Repairers	20	1.44	N/A
Cable Splicer	20	1.44	0
Control Room Operator	20	1.44	6
Electrician	50	3.60	4
Ground Worker, Utilities	20	1.44	6
Line Installer-Repairer	90	6.47	3
Sub Station Operator	10	0.72	6
Trouble Shooter, Power Line	10	0.72	5
Turbine Operator	10	0.72	5
Dispatcher, Load	20	1.44	6
Tree Trimmer	10	0.72	6
All Other Skilled Workers	60	4.32	N/A
All Other Semiskilled Workers	20	1.44	N/A
All Other Unskilled Workers	10	0.72	N/A
Clerical Occupations	560	40.29	N/A
Cashier	10	0.72	5
Collector	20	1.44	3
File Clerk	10	0.72	6
General Clerk	200	14.39	6
Secretary	20	1.44	2
Typist	40	2.88	6
Customer Service Representative	70	5.04	2

SIC 493 (cont.)

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
All Other Office Clerical Workers	70	5.04	N/A
Meter Reader, Utilities	60	4.32	1
Shipping/Receiving Clerk	10	0.72	6
Stock Clerk	20	1.44	3
Dispatcher, Vehicle	20	1.44	6
All Other Plant Clerical Workers	10	0.72	N/A
Sales Occupations	50	3.60	N/A
TOTAL	1,390	100.00	N/A

S I C

50 - 51

Wholesale Trade had an increase in employment of nearly 14,000 in the period from 1976 to 1979. The durable goods increase was 15.6 percent and nondurables 7.9 percent.

In the Durable goods sector, the Distribution of Machinery, Equipment and Supplies (SIC 508) maintained its position with the most employment (25,851).

In Nondurable goods all industries shared the increase in employment except Farm-Products Raw Materials (SIC 515). Firms distributing Groceries and related products (SIC 514) continued to have the most employment (20,973).

The Clerical category, which accounts for nearly one third of employment, is dominated by office personnel and shipping and receiving related occupations.

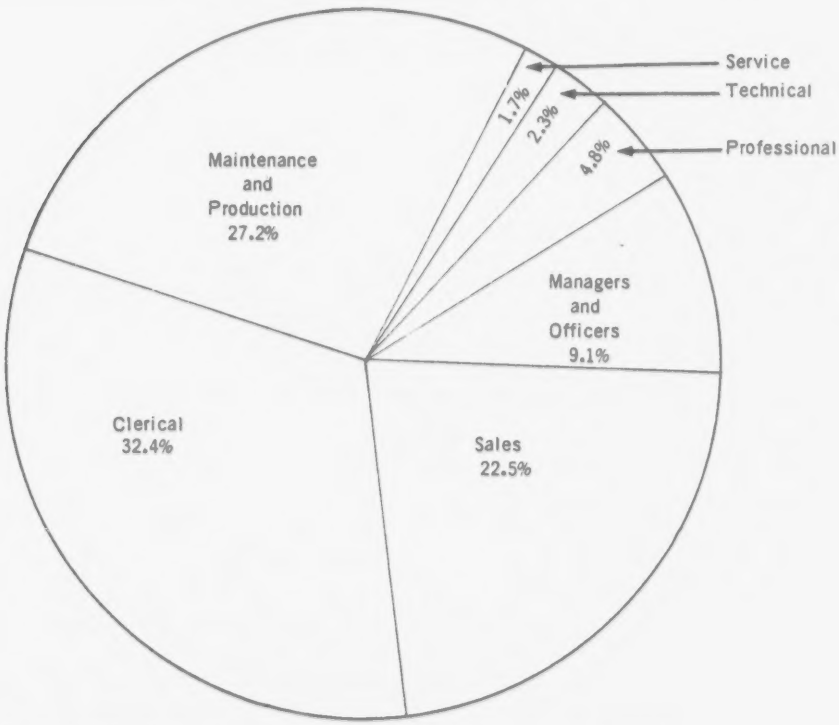
Truck Drivers, delivery workers and order fillers make up the majority of employment in the Maintenance and Production category.

In the Professional category Buyers outnumbered all other occupations including accountants and auditors.

WHOLESALE TRADE (SIC 50 & 51)

These major groups include establishments primarily engaged in the Wholesale distribution of durable and nondurable goods.

DISTRIBUTION OF EMPLOYMENT BY MAJOR OCCUPATIONAL CATEGORY



Ranked Occupational Employment in Wholesale Trade

1. Sales Representative, Non-Technical	13,820	6. Wholesaler	5,260
2. Sales Representative, Technical	12,410	7. Truck Driver	6,060
3. General Clerk	8,370	8. Stock Clerk-Storeroom	4,920
4. Order Filler	6,140	9. Shipping Packer	4,220
5. Delivery and Route Worker	5,650	10. Secretary	4,070

These 10 occupations make up 55 percent of total industry employment.

OCCUPATIONS OF EMPLOYEES
WHOLESALE TRADE (SIC 50 & 51)

Reference Date June 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	11,850	9.12	N/A
Manager, Merchandise	2,800	2.15	5
Wholesaler	5,260	4.05	5
All Other Managers	3,790	2.92	13
Professional Occupations	6,240	4.80	N/A
Chemical Engineer	70	0.05	24
Mechanical Engineer	600	0.46	20
All Other Engineers	720	0.55	N/A
Chemist	20	0.02	28
Buyer	1,980	1.52	6
Accountants and Auditors	1,550	1.19	5
Designer	40	0.03	29
All Other Professional Workers	1,260	0.97	N/A
Technical Occupations	3,010	2.32	N/A
Computer Programmer	590	0.45	21
Drafter	50	0.04	35
All Other Engineering Technicians	2,210	1.70	N/A
Science Technician	50	0.04	20
All Other Technicians	110	0.08	N/A
Service Occupations	2.180	1.68	N/A
Janitors, Porters, and Cleaners	760	0.58	8
All Other Service Workers	1,420	1.09	N/A
Mantenance and Production Occupations	35,310	27.17	N/A
Supervisor, Nonworking	1,950	1.50	7
Mechanic, Auto	680	0.52	17
Body Repairer, Auto	50	0.04	27
Diesel Mechanic	440	0.34	12
Engineering Equipment Mechanic	790	0.61	33
Office Machine Servicer	2,220	1.71	20
All Other Mechanics and Repairers	580	0.45	N/A
Truck Driver	5,060	3.89	5
Carpenter	40	0.03	28
Delivery and Route Workers	5,650	4.35	7
Merchandise Displayer	20	0.02	13
Electrician	10	0.01	27
Industrial Truck Operator	880	0.68	11
Maintenance Repairer, General Utlity	1,160	0.89	9
Oil Burner Installer/Repairer	60	0.05	18
Order Filler	6,140	4.72	8
Plumber/Pipefitter	20	0.02	26
Sheet Metal Worker	30	0.02	24

SIC 50 & 51 (cont.)

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Alteration Tailor	30	0.02	32
Welders and Flamecutters	30	0.02	14
Fuel Pump Attendant	760	0.58	18
Furniture Finisher	20	0.02	30
Baker	110	0.08	26
Cake Decorator	140	0.11	26
Conveyor Operator/Tender	380	0.29	35
All Other Skilled Workers	1,400	1.08	N/A
All Other Semiskilled Workers	2,900	2.23	N/A
All Other Unskilled Workers	3,760	2.89	N/A
Clerical Occupations	42,160	32.44	N/A
Bookkeeping/Billing Machine Operator	1,320	1.02	5
Computer Operator	150	0.12	18
Keypunch Operators	1,130	0.87	7
All Other Office Machine Operators	20	0.02	N/A
Accounting Clerk	2,350	1.81	5
Bookkeeper, Hand	2,890	2.22	4
Cashier	980	0.75	11
General Clerk	8,370	6.44	5
Order Clerk	4,020	3.09	7
Payroll/Timekeeping Clerk	20	0.02	19
Receptionist	250	0.19	8
Secretary	4,070	3.13	4
Switchboard Operation	250	0.19	17
Switchboard Operator/Receptionist	960	0.74	8
Typist	1,600	1.23	8
All Other Office Clerical Workers	610	0.47	N/A
Shipping Packer	4,220	3.25	6
Shipping Receiving Clerk	3,550	2.73	6
Weigher, Record-Keeping	210	0.16	9
Stock Clerk, Storeroom	4,920	3.79	5
Marking Clerk	170	0.13	25
All Other Plant Clerical Workers	100	0.08	N/A
Sales Occupations	29,230	22.49	N/A
Sales Representative, Technical	12,410	9.55	5
Sales Representative, Non-Technical	13,820	10.63	3
Sales Clerks	2,980	2.29	6
All Other Sales Workers	20	0.02	N/A
TOTAL	129,980	100.00	N/A

OCCUPATIONS OF EMPLOYEES
MOTOR VEHICLES AND AUTO EQUIPMENT (SIC 501)

Reference Date June 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	970	10.79	N/A
Manager, Merchandise	250	2.78	30
Wholesaler	460	5.12	17
All Other Managers	260	2.89	36
Professional Occupations	290	3.23	N/A
Buyer	150	1.67	25
Accountants/Auditors	100	1.11	30
All Other Professional Workers	40	0.44	N/A
Technical Occupations	40	0.44	N/A
Service Occupations	30	0.33	N/A
Maintenance and Production Occupations	2,460	27.36	N/A
Supervisor, Nonworking	110	1.22	26
Mechanic, Auto	270	3.00	44
All Other Mechanics	270	3.00	N/A
Truck Driver	250	2.78	27
Delivery and Route Workers	470	5.23	23
Industrial Truck Operator	50	0.56	49
Machinist	70	0.78	44
Maintenance Repairer, General Utility	80	0.89	40
Order Filler	440	4.89	33
Fuel Pump Attendant	70	0.78	0
All Other Skilled Workers	20	0.22	N/A
All Other Semiskilled Workers	230	2.56	N/A
All Other Unskilled Workers	130	1.45	N/A
Clerical Occupations	2,470	27.47	N/A
Bookkeeping/Billing Machine Operator	130	1.45	29
Keypunch Operator	50	0.56	29
Accounting Clerk	160	1.78	27
Bookkeeper, Hand	310	3.45	19
General Clerk	320	3.56	21
Order Clerk	130	1.45	32
Secretary	150	1.67	33
Switchboard Operator/Receptionist	30	0.33	37
All Other Office Clerical Workers	150	1.67	N/A
Shipping Packer	240	2.67	44
Shipping/Receiving Clerk	260	2.89	36
Stock Clerk	530	5.90	19
All Other Plant Clerical Workers	10	0.11	N/A

SIC 501 (cont.)

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Sales Occupations	2,730	30.37	N/A
Sales Representative, Technical .	450	5.01	29
Sales Representative, Non-Technical	1,390	15.46	18
Sales Clerk	880	9.79	23
All Other Sales Workers	10	0.11	N/A
TOTAL	8,990	100.00	N/A

OCCUPATIONS OF EMPLOYEES
LUMBER AND CONSTRUCTION MATERIALS (SIC 503)

Reference Date June 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	490	11.48	N/A
Manager, Merchandise	150	3.51	17
Wholesaler	260	6.09	25
All Other Managers	80	1.87	N/A
Professional Occupations	200	4.68	N/A
Accountants/Auditors	110	2.58	32
All Other Professional Workers	90	2.11	N/A
Technical Occupations	10	0.23	N/A
Service Occupations	10	0.23	N/A
Maintenance and Production Occupations	1,250	29.27	N/A
Truck Driver	470	11.01	21
Industrial Truck Operator	100	2.34	34
All Other Skilled Workers	340	7.96	N/A
All Other Semiskilled Workers	220	5.15	N/A
All Other Unskilled Workers	120	2.81	N/A
Clerical Occupations	1,560	36.53	N/A
Accounting Clerk	160	3.75	29
Bookkeeper, Hand	120	2.81	23
General Clerk	240	5.62	19
Secretary	60	1.41	33
All Other Office Clerical Workers	280	6.56	N/A
Shipping/Receiving Clerk	130	3.04	26
Stock Clerk	460	10.77	31
All Other Plant Clerical Workers	110	2.58	N/A
Sales Occupations	760	17.80	N/A
Sales Representative, Technical	220	5.15	34
Sales Representative, Non-Technical	440	10.30	16
All Other Sales Workers	100	2.58	N/A
TOTAL	4,270	100.00	N/A

OCCUPATIONS OF EMPLOYEES
HARDWARE AND PLUMBING GOODS (SIC 507)

Reference Date June 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	660	10.77	N/A
Managers, Merchandise	220	3.59	21
Wholesaler	360	5.87	14
All Other Managers	80	1.31	N/A
Professional Occupations	370	6.04	N/A
Buyer	120	1.96	24
Accountants/Auditors	140	2.28	19
All Other Professional Workers	110	1.79	N/A
Technical Occupations	110	1.79	N/A
Service Occupations	30	0.49	N/A
Maintenance and Production Occupations	1,160	18.92	N/A
Supervisor, Nonworking	90	1.47	25
Truck Driver	310	5.06	20
Order Filler	280	4.57	19
All Other Skilled Workers	320	5.22	N/A
All Other Semiskilled Workers	150	2.45	N/A
All Other Unskilled Workers	10	0.16	N/A
Clerical Occupations	2,200	35.89	N/A
Bookkeeping/Billing Machine Operator	100	1.63	32
Keypunch Operator	80	1.31	27
Accounting Clerk	90	1.47	30
Bookkeeper, Hand	220	3.59	19
Cashier	40	0.65	28
General Clerk	400	6.53	24
Order Clerk	170	2.77	34
Secretary	200	3.26	21
Switchboard Operator/Receptionist	30	0.49	24
All Other Office Clerical Workers	60	0.98	N/A
Shipping Packer	180	2.94	33
Shipping/Receiving Clerk	110	1.79	25
Stock Clerk	520	8.48	19
Sales Occupations	1,600	26.10	N/A
Sales Representative, Technical	570	9.30	25
Sales Representative, Non-Technical	690	11.26	15
Sales Clerk	340	5.55	28
TOTAL	6,130	100.00	N/A

RETAIL TRADE

SIC 52 - 59

In 1979 the trade sector of the Massachusetts economy accounted for 26 percent of total covered employment. Retail Trade represented nearly 80 percent of the 581,700 employed in this sector, and accounted for more than 20 percent of total covered employment.

Since 1976 Retail Trade employment has grown more than 10 percent, with all major industry groups sharing in this growth. SIC 58, Eating and Drinking establishments, had the greatest growth, with an increase of nearly 25,000 (20 percent). Apparel and Accessory establishments (SIC 56) recorded a 16 percent increase. The smallest increase, less than two percent, was in Automotive dealers and gasoline service stations (SIC 55) followed by Furniture, Home Furnishing and Equipment (SIC 57) with a 2.3 percent growth, and Food Stores (SIC 54) with 3.1 percent. The small growth in the Automotive sector can be attributed to the cost of energy, while the relatively small increase in Food stores was most likely due to consolidation in the number of stores by two major chains.

With the number of shopping malls still being erected through the state (many similar to Quincy Market) and the boom in hotel construction, it would appear that growth in Restaurants, and Apparel and Accessory stores will continue to lead the way in employment increase. With the cost of energy and the predicament of the Automobile industry, little or no growth can be expected in SIC 55 (Automotive Dealers and Gasoline Service Stations).

The occupational profiles published on Retail Trade represent over 60 percent of employment in this economic sector.

Building Materials, and Garden Supplies (SIC 52), while dominated by occupations in the sales category, has nearly as many employees in Maintenance and Production. The single largest occupation is sales clerk with 2330. Managers and Officers account for nearly 14 percent of employment, or one manager for every seven employers.

General Merchandise and Apparel Stores (SIC 53 and 56) have 33,000 sales clerks (37 percent), of which nearly 60 percent are employed in Department stores. Department stores have only one manager for every fourteen employees. Over fifty-percent of the professionals in department stores are buyers.

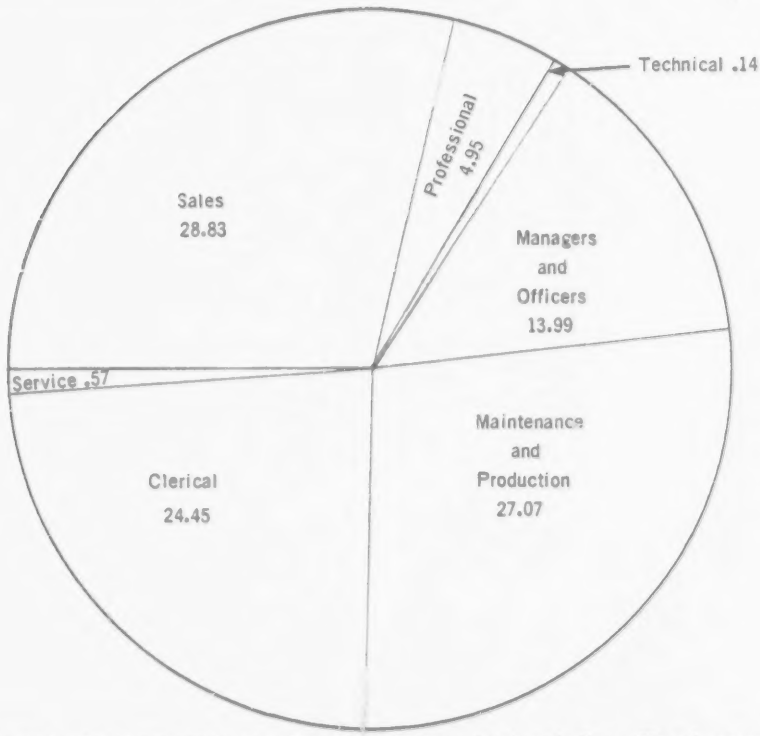
Auto Mechanics and Fuel Pump attendants are the single largest occupations in SIC 55 (Automotive Dealers and Service Stations). They represent more than 40 percent of employment.

Miscellaneous Retail Stores (SIC 59), with more than 7500 establishments, is diversified into 22 four digit standard industrial codes. Sales Clerks, Cashiers and Store Managers are the predominant occupations, accounting for more than 45 percent of employment. Pharmacists, with employment of 2646, is the largest professional occupation.

BUILDING MATERIALS, AND GARDEN SUPPLIES (SIC 52)

This major group includes retail establishments primarily engaged in selling lumber and other building materials; paint; glass and wallpaper; hardware; nursery stock; lawn and garden supplies; and mobile homes.

DISTRIBUTION OF EMPLOYMENT BY MAJOR OCCUPATIONAL CATEGORY



Ranked Occupational Employment in the Building Materials, Hardware & Mobile Homes

1.	Sales Clerk	2,330	6.	General Clerk	860
2.	Managers and Officers	1,980	7.	Bookkeeper, Hand	770
3.	Sales Representative, Non-Technical	1,370	8.	Stock Clerk, Salesfloor	730
4.	Manager, Store	1,260	9.	Stock Clerk, Storeroom	600
5.	Truck Driver	860	10.	Cashier	490

These 10 occupations make up 80% of total industry employment

OCCUPATIONS OF EMPLOYEES
BUILDING MATERIALS, HARDWARE, AND MOBILE HOMES (SIC 52)

Reference Date June 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	1,980	13.99	N/A
Manager, Merchandise	380	2.69	4
Manager, Store	1,260	8.90	2
All Other Managers	340	2.40	4
Professional Occupations	700	4.95	N/A
Buyer	420	2.97	5
Accountants/Auditors	150	1.06	10
All Other Professional Occupations	130	0.92	2
Technical Occupations	20	0.14	N/A
Service Occupations	80	0.57	N/A
Janitors, Porters, and Cleaners	50	0.35	10
Guards and Doorkeepers	20	0.14	21
All Other Service Workers	10	0.07	N/A
Maintenance and Production Occupations	3,830	27.07	N/A
Supervisor, Nonworking	140	0.99	7
Mechanic, Auto	20	0.14	10
Farm Equipment Mechanic	60	0.42	14
All Other Mechanics and Repairers	80	0.57	11
Truck Driver	860	6.08	5
Carpenter	190	1.34	16
Delivery and Route Workers	310	2.19	8
Glazier	380	2.69	9
Industrial Truck Operator	210	1.48	9
Maintenance Repairer, General Utl.	90	0.64	8
Painter, Maintenance	60	0.42	22
Stock Clerk, Salesfloor	730	5.16	5
Wood Machinist	170	1.20	10
All Other Skilled Workers	80	0.57	N/A
All Other Semiskilled Workers	90	0.64	N/A
All Other Unskilled Workers	360	2.54	N/A
Clerical Occupations	3,460	24.45	N/A
Bookkeeper, Hand	770	5.44	3
Cashier	490	3.46	6
General Clerk	860	6.08	3
Secretary	200	1.41	7
All Other Office Clerical Workers	300	2.12	N/A
Shipping/Receiving Clerk	240	1.70	5
Stock Clerk, Storeroom	600	4.24	5

SIC 52 (cont.)

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Sales Occupations	4,080	28.83	N/A
Sales Representative Technical . .	380	2.69	7
Sales Representative Non-Technical	1,370	9.68	4
Sales Clerk	2,330	16.47	3
TOTAL	14,150	100.00	N/A

OCCUPATIONS OF EMPLOYEES
LUMBER AND BUILDING PRODUCTS (SIC 521)

Reference Date June 1980

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	990	13.13	N/A
Managers, Merchandise	200	2.65	22
Manager, Store	540	7.16	11
All Other Managers	250	3.32	16
Professional Occupations	430	5.70	N/A
Buyer	210	2.79	21
All Other Professional Workers	220	2.92	N/A
Technical Occupations	20	0.27	N/A
Service Occupations	50	0.66	N/A
Janitors, Porters, and Cleaners	30	0.40	33
All Other Service Workers	20	0.27	N/A
Maintenance and Production Occupations	2,220	29.44	N/A
Supervisor, Nonworking	90	1.19	25
Mechanic, Auto	20	0.27	34
Truck Driver	770	10.21	16
Delivery and Route Worker	230	3.05	32
Industrial Truck Operator	190	2.52	29
Wood Machinist	160	2.12	31
All Other Skilled Workers	270	3.58	N/A
All Other Semiskilled Workers	80	1.06	N/A
All Other Unskilled Workers	410	5.44	N/A
Clerical Occupations	2,070	27.45	N/A
Bookkeeper, Hand	380	5.04	16
Cashier	220	2.92	32
General Clerk	450	5.97	15
Secretary	140	1.86	31
All Other Office Clerical Workers	290	3.85	N/A
Shipping/Receiving Clerk	150	1.99	20
Stock Clerk	440	5.84	21
Sales Occupations	1,760	23.34	N/A
Sales Representatives, Technical	230	3.05	28
Sales Representatives, Non-Technical	680	9.15	15
Sales Clerks	840	11.14	22
TOTAL	7,540	100.00	N/A

OCCUPATIONS OF EMPLOYEES
HARDWARE STORES (SIC 525)

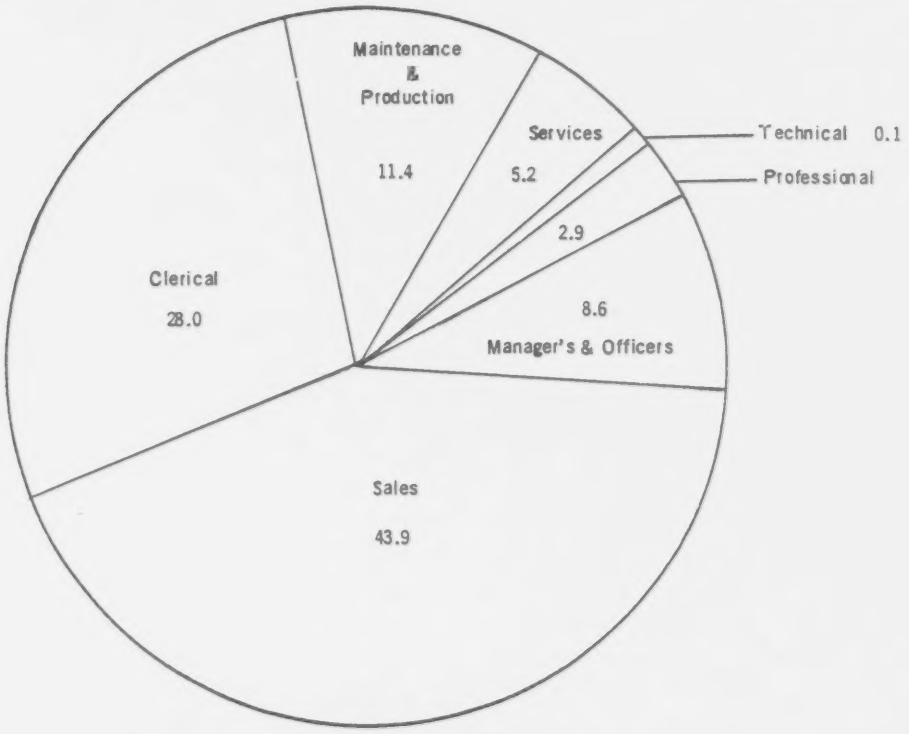
Reference Date June 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	530	15.23	N/A
Managers, Merchandise	80	2.30	27
Manager, Store	410	11.78	7
All Other Managers	40	1.15	N/A
Professional Occupations	190	5.46	N/A
Buyer	160	4.60	33
All Other Professional Workers	30	0.86	N/A
Service Occupations	20	0.57	N/A
Maintenance and Production Occupations	450	12.93	N/A
Supervisor, Nonworking	10	0.29	0
Maintenance Repairer, General Utility	10	0.29	0
Stock Clerk, Sales Floor	310	8.91	20
All Other Skilled Workers	40	1.15	N/A
All Other Semiskilled Workers	70	2.01	N/A
All Other Unskilled Workers	10	0.29	N/A
Clerical Occupations	840	24.14	N/A
Bookkeeper, Hand	210	6.03	13
Cashier	180	5.17	18
General Clerk	240	6.90	22
All Other Office Clerical Workers	40	1.15	N/A
Shipping/Receiving Clerk	50	1.44	31
Stock Clerk, Storeroom	120	3.45	17
Sales Occupations	1,450	41.67	N/A
Sales Representative, Non-Technical	270	7.76	33
Sales Clerks	1,110	31.90	10
All Other Sales Workers	70	2.01	N/A
TOTAL	3,480	100.00	N/A

GENERAL MERCHANDISE & APPAREL STORES (SIC 53 AND 56)

Included in these Major groups are Department Stores, Variety, General Merchandise, Apparel and Accessory Stores.

DISTRIBUTION OF EMPLOYMENT BY MAJOR OCCUPATIONAL CATEGORY



Ranked Occupations Employment

1.	Sales Clerk	33,040	6.	General Clerk	3,760
2.	Cashier	5,590	7.	Stock Clerk, Storeroom	3,470
3.	Stock Clerk, Sales Floor	5,590	8.	Credit Authorizer	2,510
4.	Sales Representative, Non-Technical	4,390	9.	All Other Managers	1,980
5.	Store Manager	4,190	10.	Buyer	1,900

These 10 occupations make up 75% of total industry employment.

OCCUPATIONS OF EMPLOYEES
GENERAL MERCHANDISE & APPAREL STORES (SIC 53 & 56)

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	7,640	8.57	N/A
Manager, Merchandise	1,390	1.56	6
Manager, Store	4,190	4.70	3
Manager, Auto Service	40	0.04	22
Manager, Auto Parts	20	0.02	34
Manager, Restaurant	20	0.02	22
All Other Managers	1,980	2.22	N/A
Professional Occupations	2,550	2.86	N/A
Systems Analyst, E.D.P.	30	0.03	14
Buyer	1,900	2.13	4
Accountants/Auditors	70	0.08	11
Commercial Artist	60	0.07	13
Writer/Editor	20	0.02	29
Personnel/Labor Relations Specialist	170	0.19	8
All Other Professional Workers	300	0.34	N/A
Technical Occupations	70	0.08	N/A
Computer Programmers	60	0.07	17
All Other Technicians	10	0.01	N/A
Service Occupations	4,660	5.23	N/A
Supervisor, Nonworking Service	40	0.04	11
Janitors, Porters, and Cleaners	1,080	1.21	5
Guards and Doorkeepers	470	0.53	10
Kitchen Helper	100	0.11	15
Waiter/Waitress	440	0.49	9
Counter Attendant	520	0.58	14
Cook, Short Order	30	0.03	19
Cook, Restaurant	60	0.07	14
Cosmetologist	720	0.81	16
Checker, Fitting Room	490	0.55	6
Store Detective	510	0.57	6
All Other Service Workers	200	0.22	N/A
Maintenance and Production Occupations	10,140	11.38	N/A
Supervisor, Nonworking	300	0.34	13
Mechanic, Auto	30	0.03	24
Bicycle Repairer	20	0.02	22
Mechanic, Maintenance	180	0.20	20
Gas & Electric Appliance Repairer	110	0.12	22
All Other Mechanics and Repairers	260	0.29	33
Truck Driver	80	0.09	14
Carpenter	20	0.02	2

SIC 53 & 56 (cont.)

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Delivery and Route Workers	70	0.08	15
Merchandise Displayer	330	0.37	6
Electrician	10	0.01	8
Industrial Truck Operator	210	0.24	11
Maintenance Repairer, General Utility	60	0.07	7
Helper, Trades	10	0.01	14
Order Filler	250	0.28	11
Painter, Maintenance	10	0.01	3
Sewer, Custom	70	0.08	26
Sewing Machine Operator, Regular Equipment Garment	140	0.16	13
Alteration Tailor	890	1.00	6
Stock Clerk, Sales Floor	5,590	6.27	7
Furniture Finisher	30	0.03	11
All Other Skilled Workers	440	0.49	N/A
All Other Semiskilled Workers	240	0.27	N/A
All Other Unskilled Workers	790	0.89	N/A
Clerical Occupations	24,970	28.01	N/A
Clerical Supervisor	220	0.25	13
Bookkeeping/Billing Machine Operator	40	0.04	28
Computer Operator	60	0.07	14
Keypunch Operator	270	0.30	8
Peripheral E.D.P. Equip. Operator	20	0.02	26
All Other Office Machine Operators	90	0.10	N/A
Accounting Clerk	510	0.57	10
Bookkeeping, Hand	890	1.00	4
Adjustment Clerk	630	0.71	9
Cashier	5,590	6.27	7
Collector	160	0.18	15
File Clerk	50	0.06	22
General Clerk	3,760	4.22	4
Credit Authorizer	2,510	2.82	16
Order Clerk	330	0.37	17
Payroll/Timekeeping Clerk	140	0.16	10
Personnel Clerk	110	0.12	9
Receptionist	10	0.01	20
Secretary	750	0.84	6
Service Clerk	360	0.40	23
Switchboard Operator	250	0.28	8
Typist	170	0.19	7
All Other Office Clerical Workers	1,090	1.22	N/A
Shipping Packer	460	0.52	10
Shipping/Receiving Clerk	1,580	1.77	9
Stock Clerk, Storeroom	3,470	3.89	12
Marking Clerk	1,450	1.63	7

SIC 53 & 56 (cont.)

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Sales Occupations	39,110	43.87	N/A
Sales Representative, Non-Technical	4,930	5.53	6
Sales Clerk Supervisor	820	0.92	14
Sales Clerk	33,040	37.07	3
All Other Sales Workers	320	0.36	N/A
TOTAL	89,140	100.00	N/A

OCCUPATIONS OF EMPLOYEES
DEPARTMENT STORES (SIC 531)

Reference Date June 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	2,980	5.71	N/A
Managers, Merchandise	890	1.71	30
Managers, Store	770	1.48	21
All Other Managers	1,320	2.53	N/A
Professional Occupations	1,340	2.57	N/A
Systems Analyst, E.D.P.	30	0.06	43
Buyer	770	1.48	22
Accountants/Auditors	60	0.12	38
Commercial Artist	50	0.10	42
Personnel/Labor Relations Specialist	150	0.29	26
All Other Professional Workers	280	0.54	N/A
Technical Occupations	40	0.08	N/A
Computer Programmer	30	0.06	33
All Other Technicians	10	0.02	N/A
Service Occupations	3,880	7.44	N/A
Supervisor, Nonworking Service	40	0.08	36
Janitors, Porters, and Cleaners	670	1.28	23
Guards and Doorkeepers	460	0.88	32
Waiter/Waitress	190	0.36	26
Counter Attendant, Lunchroom	510	0.98	45
Cook, Restaurant	60	0.12	43
All Other Food Service Workers	130	0.25	N/A
Cosmetologist	720	1.38	49
Checker, Fitting Room	480	0.92	18
Store Detective	510	0.98	20
All Other Service Workers	110	0.21	N/A
Maintenance and Production Occupations	5,270	10.10	N/A
Supervisor, Nonworking	300	0.58	42
All Other Mechanics and Repairing	590	1.13	N/A
Carpenter	20	0.04	7
Merchandise Displayer	260	0.50	21
Electrician	10	0.02	26
Industrial Truck Operator	210	0.40	34
Maintenance Repairer, General Repairer	40	0.08	25
Helper, Trades	10	0.02	43
Order Filler	250	0.48	35
Alteration Tailer	180	0.35	28
Stock Clerk, Sales Floor	2,260	4.33	37
Furniture Finisher	30	0.06	34

SIC 531 (cont.)

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
All Other Skilled Workers	430	0.82	N/A
All Other Semiskilled Workers	140	0.27	N/A
All Other Unskilled Workers	540	1.04	N/A
Clerical Occupations	16,760	32.13	N/A
Clerical Supervisor	220	0.42	42
Computer Operator	30	0.06	31
Keypunch Operator	220	0.42	21
All Other Office Machine Operators	150	0.29	N/A
Accounting Clerk	410	0.79	37
Adjustment Clerk	630	1.21	28
Cashier	3,690	7.07	33
General Clerk	1,320	2.53	23
Credit Authorizers	2,510	4.81	49
Order Clerk	60	0.12	49
Payroll/Timing Clerk	130	0.25	32
Personnel Clerk	110	0.21	28
Secretary	470	0.90	30
Switchboard Operator	240	0.46	27
Typist	60	0.12	25
All Other Office Clerical Workers	1,610	3.09	N/A
Shipping Packer	460	0.88	32
Shipping/Receiving Clerk	1,070	2.05	36
Marking Clerk	1,160	2.22	23
All Other Plant Clerical Workers	2,210	4.24	N/A
Sales Occupations	21,900	41.98	N/A
Sales Representative, Non-Technical	1,200	2.30	49
Sales Clerk Supervisor	820	1.57	45
Sales Clerk	19,640	37.65	13
All Other Sales Workers	240	0.46	N/A
TOTAL	52,170	100.00	N/A

OCCUPATIONS OF EMPLOYEES
FAMILY CLOTHING STORES (SIC 565)

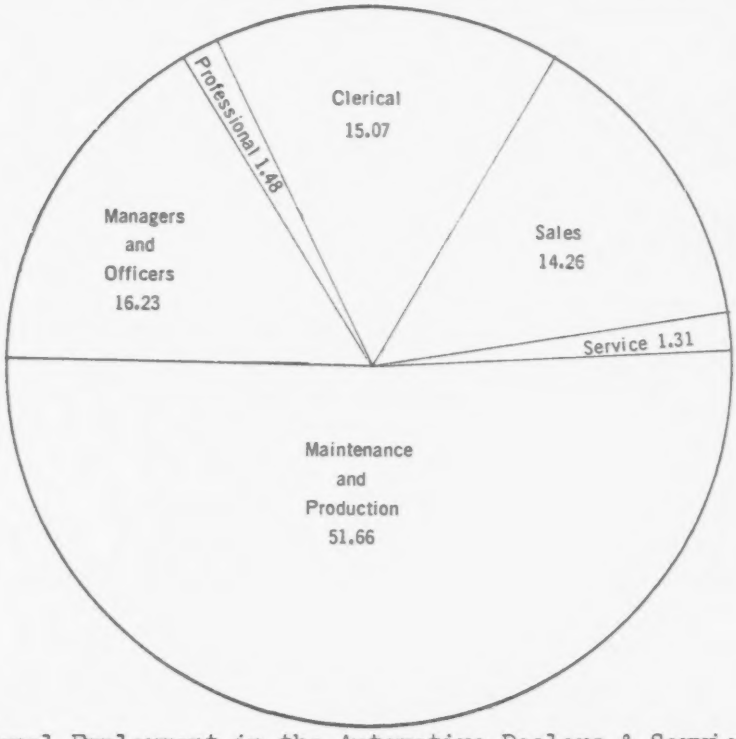
Reference Date June 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Offices	510	7.40	N/A
Managers, Store	340	4.93	15
All Other Managers	170	2.47	N/A
Professional Occupations	170	2.47	N/A
Buyer	160	2.32	21
All Other Professional Workers	10	0.15	N/A
Service Occupations	180	2.61	N/A
Janitors, Porters, and Cleaners	100	1.45	27
All Other Service Workers	80	1.16	N/A
Maintenance and Production Occupations	1,400	20.32	N/A
Truck Drivers	10	0.15	30
Merchandise Displayer	10	0.15	32
Alteration Tailer	80	1.16	31
Stock Clerk, Sales Floor	1,210	17.56	30
All Other Skilled Workers	10	0.15	N/A
All Other Semiskilled Workers	20	0.29	N/A
All Other Unskilled Workers	70	1.02	N/A
Clerical Occupations	1,930	28.01	N/A
Accounting Clerk	20	0.29	34
Bookkeeper, Hand	140	2.03	26
Cashier	650	9.43	17
General Clerk	260	3.77	21
All Other Office Clerical Workers	240	3.48	N/A
Shipping/Receiving Clerk	160	2.32	23
Stock Clerk, Storeroom	180	2.61	31
All Other Plant Clerical Workers	280	4.06	N/A
Sales Occupations	2,700	39.19	N/A
Sales Clerks	2,240	32.51	15
All Other Sales Workers	460	6.68	N/A
TOTAL	6,890	100.00	N/A

AUTOMOTIVE DEALERS AND SERVICE STATIONS (SIC 55)

This major group includes retail dealers selling new and used automobiles, boats, recreational and utility trailers, and motorcycles; those selling new automobile parts and accessories; and gasoline service stations.

DISTRIBUTION OF EMPLOYMENT BY MAJOR OCCUPATIONAL CATEGORY



Ranked Occupational Employment in the Automotive Dealers & Service Stations

1.	Mechanic, Auto	8,870	6.	General Clerk	1,420
2.	Fuel Pump Attendant	7,470	7.	Manager, Auto Parts	1,320
3.	Sales Representative, Non-Technical	4,030	8.	Body Repairer, Auto	1,300
4.	Managers, Store	3,600	9.	Manager, Auto Service	1,280
5.	Bookkeeper, Hand	1,490	10.	Stock Clerk, Storeroom	1,210

These 10 occupations make up 73% of total industry employment

OCCUPATIONS OF EMPLOYEES
AUTOMOTIVE DEALERS AND SERVICE STATIONS (SIC 55)

Reference Date June 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	6,810	16.23	N/A
Managers, Store	3,600	8.58	3
Manager, Auto Service	1,280	3.05	3
Manager, Auto Parts	1,320	3.15	3
All Other Managers	610	1.45	N/A
Professional Occupations	620	1.48	N/A
Buyer	40	0.10	25
Accountants/Auditors	570	1.36	6
All Other Professional Workers	10	0.02	N/A
Service Occupations	550	1.31	N/A
Janitors, Porters, and Cleaners	540	1.29	9
All Other Service Workers	10	0.02	N/A
Maintenance and Production Occupations	21,670	51.66	N/A
Supervisor, Nonworking	420	1.00	8
Mechanic, Auto	8,870	21.14	2
Body Repairer, Auto	1,300	3.10	6
Diesel Mechanic	120	0.29	19
Marine Mechanic	60	0.14	8
Motor Boat Mechanic	90	0.21	7
All Other Mechanics and Repairers	30	0.07	14
Truck Driver	210	0.50	14
Auto-Repair Service Estimates	160	0.38	13
Cleaner, Vehicle	760	1.81	5
Delivery and Route Worker	520	1.24	12
Machinist	20	0.05	30
Helper, Trades	280	0.67	16
Painter, Auto	90	0.21	19
Tire Fabricator/Repairer	270	0.64	29
Fuel Pump Attendant	7,470	17.81	2
Tire Changer	490	1.17	12
Mobile Home Repairer	30	0.07	9
Mobile Home Set-Up Operator	10	0.02	13
All Other Skilled Workers	30	0.07	N/A
All Other Semiskilled Workers	120	0.29	N/A
All Other Unskilled Workers	320	0.76	N/A
Clerical Occupations	6,320	15.07	N/A
Keypunch Operators	10	0.02	33
Accounting Clerk	700	1.67	5

SIC 55 (cont.)

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Bookkeeper, Hand	1,490	3.55	4
Cashier	870	2.07	16
General Clerk	1,420	3.38	6
Receptionist	100	0.24	18
Secretary	180	0.43	10
Switchboard Operator	90	0.21	17
Switchboard Operator/Receptionist	110	0.26	16
All Other Office Clerical Workers	120	0.29	N/A
Stock Clerk, Storeroom	1,210	2.88	5
All Other Plant Clerical Workers	20	0.05	N/A
Sales Occupations	5,980	14.26	N/A
Sales Representatives, Technical	1,090	2.60	11
Sales Representatives, Non-Technical	4,030	9.61	4
Sales Clerks	860	2.05	13
TOTAL	41,950	100.00	N/A

OCCUPATIONS OF EMPLOYEES
GASOLINE SERVICE STATIONS (SIC 554)

Reference Date June 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	1,760	13.17	N/A
Managers, Store	1,640	12.28	10
All Other Managers	120	0.90	N/A
Professional Occupations	160	1.20	N/A
Maintenance and Production Occupations	10,010	74.93	N/A
Mechanic, Auto	2,490	18.64	13
Fuel Pump Attendant	7,260	54.34	7
All Other Skilled Workers	40	0.30	N/A
All Other Semiskilled Workers	110	0.82	N/A
All Other Unskilled Workers	110	0.82	N/A
Clerical Occupations	1,400	10.48	N/A
Bookkeeper, Hand	560	4.19	22
All Other Clerical Workers	840	6.29	N/A
Sales Occupation	30	0.22	N/A
TOTAL	13,360	100.00	N/A

OCCUPATIONS OF EMPLOYEES
BOAT DEALERS (SIC 555)

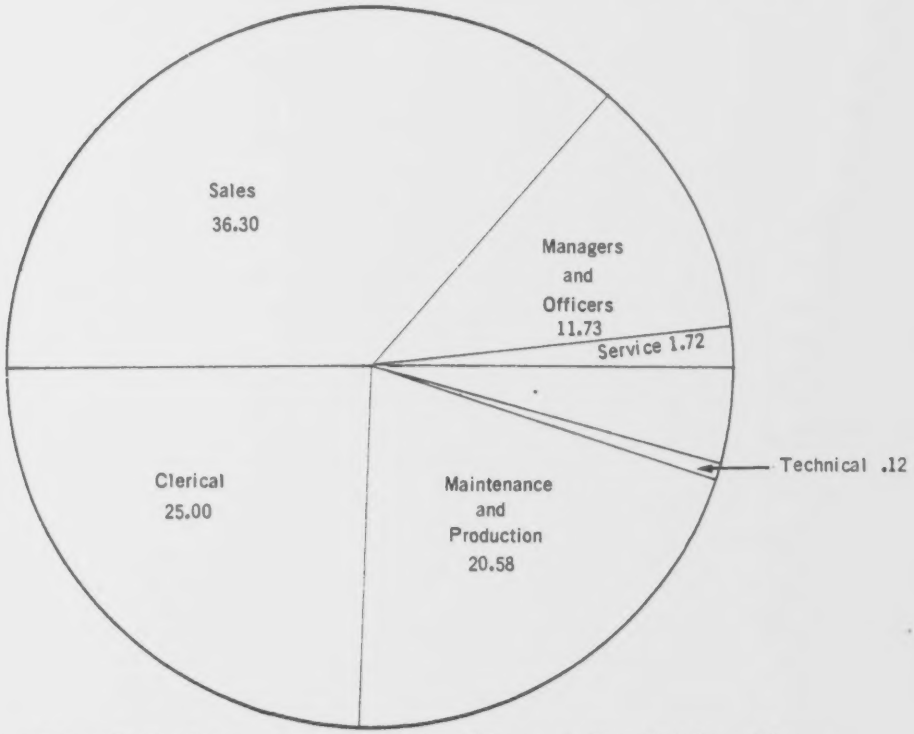
Reference Date June 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	150	15.46	N/A
Managers, Store	100	10.31	12
Manager, Service Department	20	2.06	32
All Other Managers	30	3.09	N/A
Professional Occupations	10	1.03	N/A
Service Occupations	20	2.06	N/A
Maintenance and Production Occupations	360	37.11	N/A
Supervisor, Nonworking	20	2.06	29
Marine Mechanic and Repairer	60	6.19	30
Motor Boat Mechanic	90	9.28	22
All Other Mechanics and Repairers	30	3.09	N/A
Delivery and Route Worker	20	2.06	35
All Other Skilled Workers	40	4.12	N/A
All Other Semiskilled Workers	20	2.06	N/A
All Unskilled Workers	80	8.25	N/A
Clerical Occupations	260	26.80	N/A
Bookkeeper, Hand	80	8.25	12
General Clerk	40	4.12	25
Secretary	20	2.06	35
All Other Clerical Office Workers	30	3.09	N/A
Stock Clerk, Storeroom	90	9.28	23
Sales Occupations	170	17.53	N/A
Sales Representatives, Technical	30	3.09	26
Sales Representatives, Non-Technical	90	9.28	28
All Other Sales Workers	50	5.15	N/A
TOTAL	970	100.00	N/A

FURNITURE AND HOME FURNISHINGS STORES (SIC 57)

This major group includes retail stores selling goods used for furnishing the home, such as furniture, floor coverings, draperies glass and chinaware, domestic stoves, refrigerators, and other household electrical and gas appliances.

DISTRIBUTION OF EMPLOYMENT BY MAJOR OCCUPATIONAL CATEGORY



Ranked Occupational Employment in the Furniture & Furnishing Stores

1. Sales Representative, Non-Technical	2,440	6. Delivery and Route Workers	770
2. Sales Clerk	1,940	7. Bookkeeper, Hand	620
3. Sales Representative, Technical	1,420	8. Stock Clerk, Storeroom	520
4. Manager, Store	1,350	9. All Other Office Clerical Workers	430
5. General Clerk	780	10. Cashier	380

These 10 occupations make up 65% of total industry employment

OCCUPATIONS OF EMPLOYEES
FURNITURE AND FURNISHING STORES (SIC 57)

Reference Date June 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	1,910	11.73	N/A
Manager, Merchandise	370	2.27	6
Manager, Store	1,350	8.29	4
All Other Managers	190	1.17	N/A
Professional Occupations	740	4.55	N/A
Buyer	370	2.27	6
Designer	250	1.54	13
All Other Professional Workers	120	0.74	N/A
Technical Occupations	20	0.12	N/A
Service Occupations	280	1.72	N/A
Janitors, Porters, and Cleaners	270	1.66	8
All Other Service Workers	10	0.06	N/A
Maintenance and Production Occupations	3,350	20.58	N/A
Supervisor, Nonworking	70	0.43	12
Refrigeration/Air Conditioning Mechanic	50	0.31	12
Television Servicer	260	1.60	7
Gas and Electric Appliance Repairer	250	1.54	10
Truck Driver	290	1.78	10
Cabinetmaker	230	1.41	18
Carpet Cutter	60	0.37	19
Carpenter	10	0.06	31
Delivery and Route Workers	770	4.73	6
Musical Instrument Repairer	100	0.61	13
Furniture Assembler	130	0.80	16
Household-Appliance Installer	70	0.43	13
Stock Clerk, Sales Floor	360	2.21	10
Furniture Finisher	270	1.66	8
Furniture Upholsterer	20	0.12	24
All Other Skilled Workers	10	0.06	N/A
All Other Semiskilled Workers	110	0.68	N/A
All Other Unskilled Workers	290	1.78	N/A
Clerical Occupations	4,070	25.00	N/A
Clerical Supervisors	270	1.66	10
Accounting Clerk	250	1.54	9
Bookkeeper, Hand	620	3.81	6
Adjustment Clerk	50	0.31	30

SIC 57 (cont.)

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Cashier	380	2.33	10
General Clerk	780	4.79	9
Credit Authorizer	80	0.49	29
Receptionist	20	0.12	26
Secretary	190	1.17	9
Service Clerk	70	0.43	16
Switchboard Operator	20	0.12	25
Switchboard Operator/Receptionist	40	0.25	15
All Other Office Clerical Workers	430	2.64	N/A
Shipping Packer	130	0.80	14
Shipping/Receiving Clerk	200	1.23	9
Stock Clerk,Storeroom	520	3.19	17
Sales Occupations	5,910	36.30	N/A
Sales Representatives, Technical	1,420	8.72	7
Sales Representative, Non-Technical	2,440	14.99	5
Sales Clerk	1,940	11.92	11
All Other Sales Workers	110	0.68	13
TOTAL	16,280	100.00	N/A

OCCUPATIONS OF EMPLOYEES
HOUSEHOLD-APPLIANCE STORES (SIC 572)

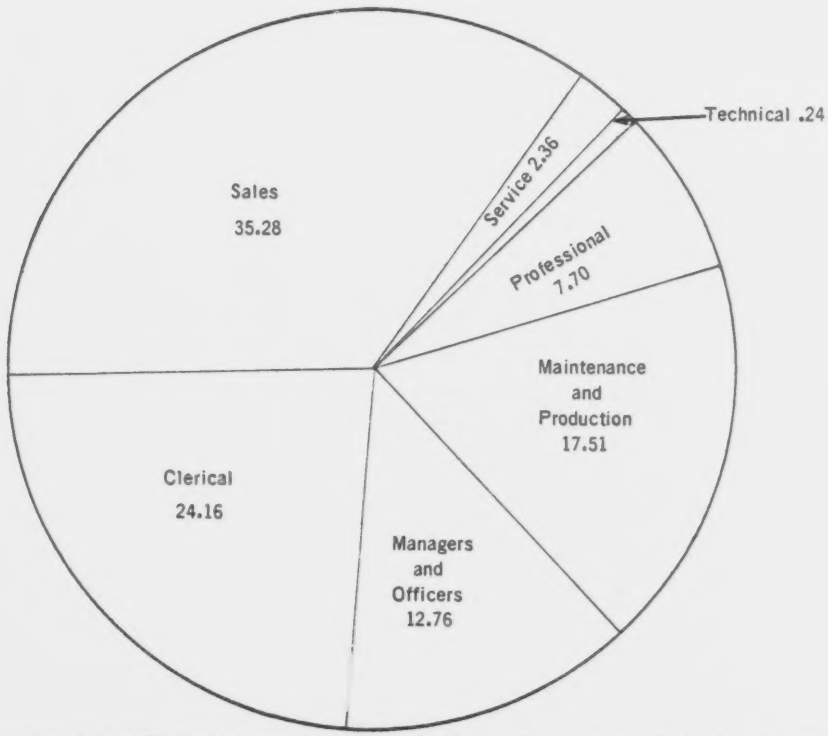
Reference Date June 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	250	7.94	N/A
Manager, Store	200	6.35	14
All Other Managers	50	1.59	N/A
Professional Occupations	10	0.32	N/A
Service Occupations	20	0.62	N/A
Maintenance and Production Occupations	590	18.73	N/A
Gas and Electric Appliance Repairer	240	7.62	33
All Other Appliance Repairer . .	120	3.81	N/A
All Other Skilled Workers	70	2.22	N/A
All Other Semiskilled Workers . .	150	4.76	N/A
All Other Unskilled Workers . .	10	0.32	N/A
Clerical Occupations	1,000	31.75	N/A
Accounting Clerk	50	1.59	33
Bookkeeper, Hand	80	2.54	31
Cashier	60	1.90	27
All Other Office Clerical Workers	670	21.27	N/A
Stock Clerk, Storeroom	90	2.86	23
All Other Plant Clerical Workers	50	1.59	N/A
Sales Occupations	1,280	40.63	N/A
Sales Representative, Non-Technical	920	29.21	21
Sales, Clerk	210	6.67	33
All Other Sales Workers	150	4.76	N/A
TOTAL	3,150	100.00	N/A

MISCELLANEOUS RETAIL (SIC 59)

This major group includes retail establishments, not elsewhere classified, including drug stores, liquor stores, used merchandise stores, nonstore retailers, fuel and ice dealers, and other miscellaneous retailers.

DISTRIBUTION OF EMPLOYMENT BY MAJOR OCCUPATIONAL CATEGORY



Ranked Occupational Employment in the Miscellaneous Retail Stores

1.	Sales Clerk	16,690	6.	Pharmacist	2,640
2.	Cashier	6,640	7.	Stock Clerk, Salesfloor	2,280
3.	Manager, Store	5,790	8.	General Clerk	1,960
4.	Sales Representative, Non-Technical	3,920	9.	Sales Representative, Technical	1,760
5.	Delivery & Route Wkrs.	2,130	10.	Bookkeeper, Hand	1,540

These 10 occupations make up 71% of total industry employment

OCCUPATIONS OF EMPLOYEES
MISCELLANEOUS RETAIL STORES (SIC 59)

Reference Date June 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	8,100	12.76	N/A
Managers, Merchandise	1,270	2.00	6
Manager, Store	5,790	9.12	2
All Other Managers	1,040	1.64	7
Professional Occupations	4,890	7.70	N/A
Buyer	660	1.04	7
Accountants/Auditors	390	0.61	6
Commercial Artist	50	0.08	35
Writers and Editors	30	0.05	21
Pharmacist	2,640	4.16	4
Designer	840	1.32	9
All Other Professional Workers	280	0.44	N/A
Technical Occupations	150	0.24	N/A
Service Occupations	1,500	2.36	N/A
Janitors, Porters, and Cleaners	340	0.54	15
Counter Attendant	520	0.82	18
Cook, Short Order	80	0.13	22
Food Preparer, Fast Food	460	0.72	19
All Other Food Service Worker	70	0.11	N/A
All Other Service Workers	30	0.05	N/A
Maintenance and Production Occupations	11,120	17.51	N/A
Supervisor, Nonworking	30	0.05	23
Mechanic, Auto	200	0.31	11
Bicycle Repairer	180	0.28	21
Office Machine Servicer	170	0.27	29
Vending Machine Servicer	370	0.58	14
Gas and Electric Appliance Installer	70	0.11	12
All Other Mechanics and Repairers	40	0.06	N/A
Truck Driver	1,360	2.14	5
Delivery and Route Workers	2,130	3.35	5
Jeweler/Silversmith	50	0.08	23
Oil Burner Installer/Servicer	1,540	2.43	2
Order Filler	800	1.26	12
Plumber/Pipefitter	20	0.03	16
Watchmaker	120	0.19	17
Fuel Pump Attendant	110	0.17	15
Optician, Dispensing	140	0.22	19
Stock Clerk, Sales Floor	2,280	3.59	11
Furniture Finisher	10	0.02	29

SIC 59 (cont.)

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
All Other Skilled Workers	180	0.28	N/A
All Other Semiskilled Workers	270	0.43	N/A
All Other Unskilled Workers	1,050	1.65	N/A
Clerical Occupations	15,340	24.16	N/A
Clerical Supervisor	130	0.20	25
Bookkeeping/Billing Machine Operator	480	0.76	6
Computer Operator	50	0.08	17
Keypunch Operator	80	0.13	22
All Other Office Machine Operators	30	0.05	N/A
Accounting Clerk	520	0.82	7
Bookkeeper, Hand	1,540	2.43	5
Cashier	6,640	10.46	6
Collector	40	0.06	23
General Clerk	1,960	3.09	5
Order Clerk	610	0.96	10
Receptionist	100	0.16	14
Secretary	480	0.76	8
Switchboard Operator	60	0.09	22
Switchboard Operator/Receptionist	140	0.22	11
Typist	340	0.54	8
All Other Office Clerical Workers	560	0.88	N/A
Shipping/Receiving Clerk	570	0.90	10
Stock Clerk, Storeroom	890	1.40	8
Dispatcher, Vehicle	70	0.11	10
Marking Clerk	50	0.08	20
Sales Occupations	22,400	35.28	N/A
Sales Representatives/Technical	1,760	2.77	11
Sales Representatives/Non-Technical	3,920	6.17	9
Sales Clerks	16,690	26.28	3
All Other Sales Workers	30	0.05	N/A
TOTAL	63,500	100.00	N/A

OCCUPATIONS OF EMPLOYEES
FUEL AND ICE DEALERS (SIC 598)

Reference Date June 1979

OCCUPATION	EMPLOYMENT		
	Number	Percent	Relative Error Percent
Managers and Officers	750	11.00	N/A
Manager, Merchandise	220	3.23	19
Manager, Store	270	3.96	15
All Other Managers	260	3.81	31
Professional Occupations	90	1.32	N/A
Buyer	10	0.15	42
Accounting/Auditors	80	1.17	33
Service Occupations	50	0.73	N/A
Janitors, Porters, and Cleaners	40	0.59	44
All Other Service Workers	10	0.15	N/A
Maintenance and Production Occupations	3,920	57.48	N/A
Mechanic, Auto	120	1.76	20
Gas and Electric Appliance Repairer	50	0.73	40
All Other Mechanics and Repairers	70	1.03	N/A
Truck Driver	1,010	14.81	12
Delivery and Route Workers	860	12.61	10
Oil-Burner Installer/Repairer	1,540	22.58	6
Fuel Pump Attendant	110	1.61	49
All Other Skilled Workers	40	0.59	N/A
All Other Semiskilled Workers	10	0.15	N/A
All Other Unskilled Workers	110	1.61	N/A
Clerical Occupations	1,760	25.81	N/A
Bookkeeping/Billing Machine Operator	230	3.37	16
Accounting Clerk	160	2.35	18
Bookkeeper, Hand	220	3.23	14
Cashier	70	1.03	35
General Clerk	660	9.68	11
Secretary	130	1.91	25
Switchboard Operator/Receipt	40	0.59	32
Typist	40	0.59	42
All Other Office Clerical Workers	90	1.32	N/A
Dispatcher, Vehicle	70	1.03	32
All Other Plant Clerical Workers	50	0.73	N/A
Sales Occupations	250	3.67	N/A
Sales Representatives, Technical	110	1.61	18
Sales Representatives, Non-Technical	80	1.17	28
Sales Clerk	60	0.88	50
TOTAL	6,820	100.00	N/A